

HB

19

POLLS

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Respondents want to ditch daylight-saving time

by Channel 2 News staff
Saturday, March 7, 2009

ANCHORAGE, Alaska -- In a poll conducted by Channel 2 News, respondents were asked if Alaska should continue to observe daylight-saving time.

Here is the official question and results.

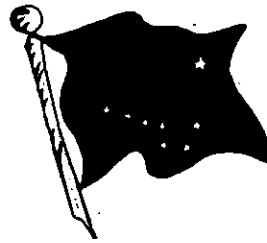
Should Alaska continue to observe daylight-saving time?

Yes	23 %
No	77 %

All polls conducted by Channel 2 News and KTUU.com are unscientific.



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ABOLISH DAYLIGHT SAVING TIME IN ALASKA

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THE 2004 DITTMAN RESEARCH POLL DATA

THE SURVEY QUESTION: In early April, Alaska switched to Daylight Saving Time. In October , we will adjust our clocks and switch back again. What is your opinion about that- do you support Alaska switching to Daylight Saving Time for the summer and then switching back in the fall, or should we leave our clocks the same throughout the year?
n=505

	UNSURE	SWITCH CLOCKS	KEEP SAME ALL YEAR	BASE
TOTAL	5%	37%	58%	100%

LOCATION	UNSURE	SWITCH CLOCKS	KEEP SAME ALL YEAR	BASE
RURAL	0%	30%	70%	11.1%
CENTRAL	7%	37%	56%	13.9%
SOUTH-CENTRAL	8%	26%	67%	23.0%
ANCHORAGE	4%	41%	55%	39.9%
SOUTHEAST	5%	55%	40%	12.1%

TIME IN ALASKA	UNSURE	SWITCH CLOCKS	KEEP SAME ALL YEAR	BASE
0-4 YEARS	0%	26%	74%	2.4%
5-9 YEARS	9%	46%	45%	5.0%
10-14 YEARS	9%	46%	45%	4.5%
15+ YEARS	5%	37%	59%	88.0%

AGE	UNSURE	SWITCH CLOCKS	KEEP SAME ALL YEAR	BASE
18-29 YEARS	4%	63%	33%	6.4%
30-44 YEARS	4%	42%	54%	22.3%
45-59 YEARS	5%	34%	61%	50.4%
60 PLUS	7%	32%	60%	20.9%

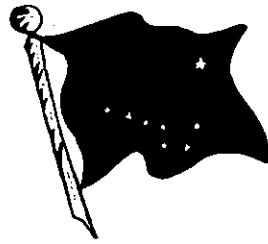
REGISTRATION	UNSURE	SWITCH CLOCKS	KEEP SAME ALL YEAR	BASE
DEMOCRAT	7%	40%	52%	15.0%
REPUBLICAN	4%	37%	60%	25.6%
NON-PARTISAN	5%	38%	57%	51.8%
OTHER	9%	24%	67%	7.6%

GENDER	UNSURE	SWITCH CLOCKS	KEEP SAME ALL YEAR	BASE
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MALE	7%	35%	58%	52.5%
FEMALE	3%	40%	57%	47.8%

EMPLOYER	UNSURE	SWITCH CLOCKS	KEEP SAME ALL YEAR	BASE
FEDERAL	7%	25%	68%	7.5%
STATE	2%	36%	62%	9.7%
LOCAL	1%	41%	58%	11.2%
PRIVATE	5%	39%	56%	45%
NOT IN WORKFORCE	9%	36%	56%	26.6%

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ABOLISH DAYLIGHT SAVING TIME IN ALASKA

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**THE 2005 HELLENTHAL AND ASSOCIATES RESEARCH POLL
DATA**

THE SURVEY QUESTION: For Alaskans and most of the United States, "Daylight Savings Time" begins at 2a.m. on the first Sunday of April and ends at 2 a.m. on the last Sunday of October. During "Daylight Savings Time", clocks are turned forward an hour, moving an hour of Daylight from the morning to the evening. Do you favor or oppose doing away with "Daylight Saving Time" and staying on the same time throughout the year?

n=323

DOING AWAY WITH DST	FREQUENCY	PERCENT
FAVOR	161	49.9
OPPOSE	118	36.6
DON'T KNOW	44	13.5

AREAS OF ALASKA	FREQUENCY	PERCENT	MARGIN OF ERROR
SOUTHEAST	51	15.8	+/- 13.7%
VALDEZ-KENAI-MATSU	61	18.9	+/- 12.5%
ANCHORAGE	124	38.4	+/- 8.8%
GREATER FAIRBANKS	46	14.2	+/- 14.4%
RURAL/BUSH	41	12.7	+/- 15.3%
TOTALS	323	100	+/- 5.45%

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Alaska State Chamber

Zoomerang Survey Results

Do you Support or Oppose (HB19) Eliminating Daylight Savings Time?

Response Status: Completes

Filter: No filter applied

Mar 10, 2009 3:02 PM PST

Purpose of Survey: This survey will take less than 5 minutes. Please let us thank you ahead of time for taking the survey. We want to know how our members feel about House Bill 19. I will be taking the results to a hearing as soon as the committee sets the date and reporting our results. Please know that your answer will be kept confidential. Thank you. **Relevant Information:** (HB19) was introduced in the House of Representatives to eliminate Daylight Savings time in Alaska between 2:00 a.m. on the second Sunday in March and 2:00 a.m. on the first Sunday in November in each calendar year. Elimination of the switch to daylight savings would mean that Alaska would be two hours behind Pacific Coast Time and five hours behind East Coast time for that period when Daylight Savings is in effect.

1. Do you support or oppose the elimination of Daylight Savings Time in Alaska? YES = I would like to change daylight savings time. NO = I would like to keep it the same.

Yes	30	35%
No	56	65%
Total	86	100%

Title	Entity	City	Support Repeal	Oppose Repeal	Support Year Round DST	Need Board Vote	No decision	Prefers to be 3 behind East Coast
Chairman & President	First National Bank Alaska	Anchorage	1					
		Anchorage	1					
		Willow	1					
		Seward			1			
		Tok			1			
Administrative Manager	Gusty Michael School SeaView Community Services	Seward	1					
		Kodiak	1					
Superintendent	Yukon Flats School District	Fort Yukon			1			
Human Resource Technician	Alaska SeaLife Center	Seward	1					
Principal - Upriver School	Upriver School - Kuspuk School District		1					
Teacher		Aniak				1		
Teacher		Aniak	1					
Dev. Director & Programs Manager	Eyak Preservation Council	Cordova	1					
IT Support Technician	SeaView Community Services	Seward	1					
		Seward	1			1		
Secretary - Crow Village Sam School	Kuspuk School District	Chuathbaluk	1					
Site Administrator - Lewis Angapak Memorial School	Lower Kuskokwim School District	Aniak	1					
		Tuntutuliak	1					
		Seward				1		
2nd Grade Teacher - Ayaprun Immersion School	Lower Kuskokwim School District	Bethel	1					
English Teacher - Kilbuck Elementary School	Lower Kuskokwim School District	Bethel	1					
		Viking Travel			1			
Itinerant SPED - McGrath	Sitka Chamber of Commerce Iditarod Area School District	Sitka					1	
		McGrath	1					
		Eagle River			1			
Finance Director & School Board Member	City of Unalaska & Unalaska School District	Palmer	1					
		Unalaska	1					
6th Grade Teacher - Kilbuck Elementary School	Lower Kuskokwim School District	Cook Inlet Housing	1					
		Bethel	1					
		Petersburg			1			
	Guest House at Water's Edge & Kaleidoscope Cruises	Petersburg	1					
		Petersburg			1			
		Eagle River			1			
Sr. Bookkeeper	Cook Inlet Housing	Anchorage					1	
Principal - Platinum School	Lower Kuskokwim School District	Platinum	1					
Executive Director	Chugiak-Eagle River Chamber of Commerce	Eagle River			1			
Reporter	Alaska Star	Wasilla	1					
Teacher & Athletics - Middle School and Nelson Island High School	Lower Kuskokwim School District	Toksook Bay	1					
Owner - Bradley House	Eaglewood Association	Eagle River					1	
		Anchorage	1					
Teachers	King Career Center	Seward	1					
		Eagle River	1					
PH.D.		Eagle River	1					
		Anchorage	1					
		Unalaska	1					
Teacher level 1-3	Zackar Levi Elementary Anchorage School District	Seward	1					
		Lower Kalskag	1					
		Chugiak	1					
		Seward	1					
		Eagle River	1					

Title	Entity	City	Support	Repeal	Oppose	Repeal	Support Year Round DST	Need Board Vote	No decision	Prefers to be 3 behind East Coast
	Koman Inc.	Eagle River								
Flight Service Center	Elmendorf AFB Supply	Eagle River	1							
Escrow Assistant	Alyeska Title Guaranty Agency	Chugiak	1							
		Naknek	1							
		Seward	1							
Business Owner		Eagle River	1							
	Alyeska Title Guaranty Agency	Eagle River	1							
Site Administrator - Akiuk Memorial School	Lower Kuskokwim School District	Kasigluk	1							
		Chugiak	1							
		Eagle River				1				
		Eagle River	1							
Contractor		Anchorage	1							
Retired Colonel		Anchorage	1							1
		Chugiak	1							
		Eagle River	1							
	Viking Travel	Petersburg					1			
		Eagle River	1							
		Eagle River	1							
Associate Broker	Prudential Vista Real Estate Inc	Eagle River							1	
		Eagle River	1							
		Eagle River	1							
Superintendent	Anchorage School District	Anchorage	1							
		Seward	1							
		Eagle River	1							
		Homer	1							
Associate Broker	Re/max of Eagle River, Inc	Eagle River	1							
		Anchorage							1	
		Eagle River	1							
Former Mayor	Bristol Bay Borough	Naknek	1							
		Eagle River	1							
		Anchorage	1							
		Eagle River	1							
School Board Member	Anchorage School District	Anchorage	1							
		Wasilla				1				
			1							
		Eagle River	1							
Superintendent	Tanana City School District		1							
		Aniak	1							
		Eagle River	1							
Teacher	Eagle River High School	Eagle River				1				
		Eagle River	1							
		Wasilla	1							
		Eagle River	1							
		Anchorage				1				
		Eagle River	1							
		Eagle River	1							
		Eagle River				1				
			1							
		Chugiak	1							
		Seward				1				
		Eagle River	1							
		Anchorage	1							

Title	Entity	City	Support	Repeal	Oppose	Repeal	Support Year Round DST	Need Board Vote	No decision	Prefers to be 3 behind East Coast
		Chugiak	1							
EM&PA Project Coordinator	Conoco Phillips	Eagle River	1							
	Seward High School Kitchen	Seward	1							
			1							
	Anchorage School District	Anchorage	1							
					1					
		Anchorage	1							
		Eagle River	1							
		Eagle River	1							
		Anchorage							1	
		Eagle River	1							
			1							
		Anchorage	1							
		Wasilla	1							
Engineer		Eagle River	1							
School Counselor	Anchorage School District	Eagle River	1							
		Eagle River	1							
		Seward	1							
		Eagle River	1							
		Eagle River				1				
Land Management Agent-Community Dev	Matsu	Wasilla				1				
Retired secondary school secretary		Anchorage	1							
		Chugiak				1				
		Eagle River	1							
		Eagle River							1	
		Willow	1							
		Eagle River	1							
		Chugiak	1							
		Eagle River	1							
		Anchorage	1							
Engineer - Project Manager	Air Force Section Corp of Engineers	Eagle River	1							
		Chugiak	1							
		Petersburg	1							
			1							
President	Team Up Business Solutions	Palmer				1				
	Arctic Controls	Eagle River	1							
Engineer	Brooks & Associates	Anchorage	1							
	Matsu	Palmer	1							1
			1							
		Seward	1							
		Eagle River	1							
		Eagle River	1							
	Seward High School	Seward	1							
	Anchorage School District	Chugiak	1							
		Eagle River	1							
		Anchorage	1							
	Anchorage School District	Anchorage	1							
		Anchorage							1	
Executive Vice President	Cook Inlet Housing	Anchorage								1
		Anchorage	1							
		Eagle River	1							
General Manager	Anchorage 5th Avenue Mall	Anchorage	1							
		Anchorage	1							

Title	Entity	City	Support	Repeal	Oppose	Repeal	Support Year Round DST	Need Board Vote	No decision	Prefers to be 3 behind East Coast
		Eagle River		1						
		Seward		1						
	Federal Government employee	Palmer								1
		Wasilla		1						
		Seward		1						
Educator	Anchorage School District	Anchorage		1						
		Anchorage		1						
Community Capital Coordinator - PM&E	Municipality of Anchorage	Anchorage		1						
		Chugiak		1						
		Big Lake								1
Shelter Services Manager	Abused Women's Aid in Crisis Inc	Anchorage		1						
Educator	Anchorage School District	Anchorage								1
		Palmer					1			
	Anchorage School District	Eagle River		1						
		Anchorage		1						
		Anchorage		1						
	Lower Kuskokwim School District									1
		Anchorage		1						
		Palmer		1						
		Anchorage		1						
		Anchorage		1						
		Eagle River		1						
		Anchorage					1			
	C&M Used Books	Anchorage					1			
Government Relations Director	City and Borough of Sitka	Sitka					1			
		Horner		1						
		Anchorage					1			
	Food Services of American	Anchorage		1						
		Anchorage		1						
		Anchorage		1						
	McKinley Capital	Anchorage					1			
Owner	Frontier Heating Concepts Inc	Palmer					1			
		Anchorage					1			
		Wasilla		1						
		North Pole		1						
		Anchorage		1						
		Sitka		1						
		Anchorage		1						
Site Administrator	Lower Kuskokwim School District	Chefomak		1						
Broker	Re/max	Anchorage								1
		Anchorage					1			
	Alyeska Resort	Girdwood					1			
Former Teacher	East Anchorage High School	Anchorage		1						
		Anchorage		1						
		Eagle River		1						
		Anchorage					1			
		Bethel		1						
		Eagle River		1						
Librarian- BRHS	Lower Kuskokwim School District	Bethel					1			
	Advocates Plus Consulting LLC	Chugiak								1
		Big Lake		1						
							1			
		Anchorage					1			

Title	Entity	City	Support	Repeal	Oppose	Repeal	Support Year Round DST	Need Board Vote	No decision	Prefers to be 3 behind East Coast
		Fairbanks				1				
		Fairbanks	1							
	University of Alaska Fairbanks	Fairbanks				1				
		Sutton	1							
		Willow	1							
		Anchorage	1							
		Unalaska	1							
		Homer	1							
Teacher - 3rd & 4th grade	Unalaska City School	Unalaska	1							
		Eagle River				1				
		Anchorage	1							
		Anchorage	1							
		Anchorage	1							
		King Salmon	1							
		Anchorage				1				
		Eagle River				1				
						1				
		Anchorage	1							
						1				
		Bethel	1							
		Chugiak				1				
		Eagle River	1							
		Palmer	1							
		Wiseman	1							
		Anchorage	1							
			1							
		Eagle River	1							
		Anchorage							1	
		Eagle River	1							
		Anchorage	1							
Sr. Project Manager	Granite Construction Company dba Wilder Cons.	Anchorage				1				
	Tonka Seafoods Inc	Petersburg								1
	Arctic Systems Programming Inc	Eagle River	1							
		Soldotna	1							
		Seward	1							
CEO	Hydaburg City School District	Hydaburg				1				
		Eagle River	1							
		Petersburg	1							
		Anchorage				1				
		Chugiak	1							
		Eagle River	1							
		Palmer	1							
		Chugiak				1				
		Palmer					1			
		Anchorage	1							
		Wasilla	1							
		Willow				1				
		Anchorage	1							
		Eagle River	1							
		Eagle River					1			
		Petersburg								1
		Wasilla	1							
		Eagle River	1							

Title	Entity	City	Support Repeal	Oppose Repeal	Support Year Round DST	Need Board Vote	No decision	Prefers to be 3 behind East Coast
				1				
		Anchorage			1			
		Seward			1			
		Eagle River		1				
	Qugcuun Memorial School	Oscarville		1				
		Anchorage			1			
		Anchorage		1				
		Anchorage		1				
		Anchorage		1				
Teacher	Aniak High School	Skagway		1				
		Eagle River			1			
		Anchorage		1				
	Denali Borough School District	Healy			1			
Executive Director	NeighborWorks Anchorage	Anchorage			1			
Manager	Wal-mart - Eagle River	Eagle River		1				
Dental Hygienist		Eagle River		1				
Pilot	Fed Ex	Eagle River			1			
School Board Member	Anchorage School District	Eagle River		1				
		Eagle River		1				
		Anchorage		1				
		Anchorage			1			
Vice President Heavy Haul	Carfile Transportation Systems	Anchorage		1				
		Soldotna			1			
Literacy Coach	Knik Elementary School	Wasilla		1				
Architect	Winchester Alaska Inc	Anchorage		1				
		Eagle River		1				
		Eagle River			1			
		Anchorage		1				
		Anchorage		1				
GBOS Roads, Fire and Facilities Manager	Municipality of Anchorage	Girdwood		1				
		Eagle River		1				
Retired teacher		Talkeetna		1				
		Eagle River		1				
	Anchorage School District	Anchorage		1				
Realtor		Eagle River		1				
		Anchorage		1				
		Anchorage			1			
		Eagle River		1				
		Eagle River		1				
Engineer	V3 Energy LLC	Eagle River			1			
		Wasilla						
		Anchorage			1			
Chief Financial Officer	City of North Pole	North Pole		1				
		Anchorage		1				
		Tok		1				
		Talkeetna		1				
		Soldotna			1			
		Eagle River		1				
		Eagle River		1				
		Eagle River		1				
		Wasilla		1				
		Chugiak		1				
		Chugiak		1				

Title	Entity	City	Support Repeat	Oppose Repeat	Support Year Round DST	Need Board Vote	No decision	Prefers to be 3 behind East Coast
		Anchorage	1					
		Eagle River	1					
		Chugiak		1				
	Breeze Inn	Seward		1				
		Eagle River	1					
	Alaska Lighthouse Cottage	Seward	1					
		Anchorage		1				
		Seward			1			
		Seward	1					
		Eagle River	1					
		Sitka	1					
		Eagle River	1					
		Anchorage		1				
		Seward	1					
		Anchorage						1
	Mat Su School District	Palmer or Big Lake	1					
	Mat Su School District	Wasilla	1					
	Mat Su School District		1					
		Eagle River		1				
		Hollis	1					
Social Studies Teacher	Houston High School	Wasilla	1					
Maintenance & Operations Fleet Services	Municipality of Anchorage	Eagle River	1					
		Eagle River		1				
Contractor	Elmendorf AFB Supply	Anchorage	1					
			1					
Owner	Taco Loco Products	Eagle River	1					
		Anchorage				1		
		Tok	1					
HHS Teacher		Willow	1					
Safety Officer	Houston Middle/High School	Wasilla	1					
		Anchorage	1					
Physician	President& Medical Director Alyeska Family Medicine	Anchorage	1					
		Chugiak	1					
		Eagle River	1					
		Eagle River	1					
High School Teacher		Palmer	1					
Teacher		Chugiak	1					
Registrar	Houston High School	Wasilla	1					
School Nurse - special education high school			1					
		Eagle River	1					
		Eagle River				1		
Retired teacher		Anchorage		1				
MLS	Houston Middle School	Wasilla	1					
		Homer	1					
		Eagle River	1					
		Tok	1					
		Hoonah						1
		Anchorage		1				
Chief Technology Officer	Sequestered Solutions Alaska LLC	Anchorage						1
		Hoonah	1					
	MOA	Eagle River						
		Wasilla	1					

Title	Entity	City	Support Repeal	Oppose Repeal	Support Year Round DST	Need Board Vote	No decision	Prefers to be 3 behind East Coast
School Bus Driver	First Student	Juneau	1					
		Fairbanks	1					
		Fairbanks	1					
		Fairbanks	1					
Corporate Director-retired	Danamac Acres Greenhouse & Farm Channel 2 broadcasting AK Corp office	Palmer	1					
		Fairbanks	1					
		Fairbanks			1			
		North Pole	1					
		Fairbanks	1					
		Fairbanks	1					
		Fairbanks	1					
		Fairbanks	1					
		Anchorage	1					
		Fairbanks	1					
		Fairbanks	1					
		North Pole	1					
Professor Mechanical Engineering		Fairbanks	1					
		Fairbanks	1					
		Fairbanks	1					
		Fairbanks	1					
		Anchorage	1					
		Fairbanks	1					
		Fairbanks	1					
		Fairbanks	1					
		Fairbanks	1					
		Fairbanks	1					
		Fairbanks	1					
		Ester	1					
		Fairbanks	1					
		Fairbanks	1					
		Fairbanks	1					
		North Pole	1					
		Wasilla	1					
		North Pole	1					
		Fritz Creek	1					
		Fairbanks			1			
		Fairbanks	1					
		Fairbanks	1					
		Anchorage	1					
		Fort Wainwright	1					
		Fairbanks	1					
		Homer	1					
		Fairbanks			1			
		Juneau			1			
		Juneau			1			
		Juneau			1			
		Fairbanks	1					
		Fairbanks	1					
		Fairbanks	1					
		Ketchikan	1					
			1					

Title	Entity	City	Support Repeal	Oppose Repeal	Support Year Round DST	Need Board Vote	No decision	Prefers to be 3 behind East Coast
		Tok	1					
		Fairbanks	1					
		Wasilla	1					
		Kodiak	1					
		Fairbanks	1					
		Palmer	1					
		Anchorage	1					
		Fairbanks	1					
Teacher	North Star School District	Fairbanks	1					
		Seward	1					
		Kasilof	1					
		Eagle River	1					
		Fairbanks	1					
		Fairbanks		1				
		Palmer	1					
		Fairbanks	1					
		Fairbanks	1					
		Fairbanks	1					
		Anchorage			1			
		Juneau		1				
		North Pole	1					
		Fairbanks	1					
		Nome	1					
		Anchorage	1					
		Fairbanks	1					
			1					
		Anchorage	1					
		Fairbanks	1					
		Fairbanks	1					
		Eagle River		1				
		Fairbanks						
		Anchorage	1					
		Homer	1					
		Willow	1					
		Wasilla	1					
		Nome	1					
		Fairbanks	1					
Interim Site Administrator	Napaskiak School	Napaskiak	1					
		Wasilla	1					
Deputy Commissioner	Dept Military and Veterans Affairs	Palmer	1					
		Anchorage		1				
Pulmonary and Sleep Medicine - MD		Anchorage	1					
		Chugiak	1					
Program Director	KGOT	Anchorage	1					
		Chugiak	1					
		Fairbanks	1					
		Anchorage	1					
		Wasilla		1				
		Eagle River	1					
		Soldotna		1				
		Wasilla	1					
		Anchorage	1					

		City	Support Repeal	Oppose Repeal	Support Year Round DST	Need Board Vote	No decision	Prefers to be 3 behind East Coast
		Anchorage	1					
		Eagle River	1					
		Anchorage			1			
		Eagle River	1					
		Fairbanks	1					
		Ketchikan		1				
		Anchorage		1				
		Kenai			1			
		Anchorage		1				
		Juneau		1				
		Wasilla	1					
		Juneau		1				
		Norway						
			361	84	17	1	15	7

**LAND
OF THE
MIDNIGHT
SUN**

Sun & Moon

Fairbanks, Alaska, United States

Rising and setting times for the Sun

Date	Sunrise	Sunset	Length of day		Time	Solar noon	
			This day	Difference		Altitude	Distance (10 ³ km)
Mar 1, 2010	8:00 AM	6:08 PM	10h 08m 32s	+ 6m 46s	1:03 PM	17.8°	148.240
Mar 2, 2010	7:56 AM	6:11 PM	10h 15m 19s	+ 6m 46s	1:03 PM	18.2°	148.277
Mar 3, 2010	7:52 AM	6:14 PM	10h 22m 05s	+ 6m 46s	1:03 PM	18.6°	148.314
Mar 4, 2010	7:49 AM	6:18 PM	10h 28m 51s	+ 6m 45s	1:02 PM	19.0°	148.352
Mar 5, 2010	7:45 AM	6:21 PM	10h 35m 36s	+ 6m 45s	1:02 PM	19.4°	148.391
Mar 6, 2010	7:42 AM	6:24 PM	10h 42m 22s	+ 6m 45s	1:02 PM	19.8°	148.430
Mar 7, 2010	7:38 AM	6:27 PM	10h 49m 07s	+ 6m 45s	1:02 PM	20.2°	148.469
Mar 8, 2010	7:34 AM	6:30 PM	10h 55m 52s	+ 6m 45s	1:02 PM	20.5°	148.509
Mar 9, 2010	7:31 AM	6:33 PM	11h 02m 37s	+ 6m 44s	1:01 PM	20.9°	148.549
Mar 10, 2010	7:27 AM	6:37 PM	11h 09m 22s	+ 6m 44s	1:01 PM	21.3°	148.589
Mar 11, 2010	7:24 AM	6:40 PM	11h 16m 06s	+ 6m 44s	1:01 PM	21.7°	148.630
Mar 12, 2010	7:20 AM	6:43 PM	11h 22m 51s	+ 6m 44s	1:01 PM	22.1°	148.670
Mar 13, 2010	7:16 AM	6:46 PM	11h 29m 35s	+ 6m 44s	1:00 PM	22.5°	148.711
Mar 14, 2010	8:13 AM	7:49 PM	11h 36m 20s	+ 6m 44s	2:00 PM	22.9°	148.752
Mar 15, 2010	8:09 AM	7:52 PM	11h 43m 04s	+ 6m 44s	2:00 PM	23.3°	148.792
Mar 16, 2010	8:05 AM	7:55 PM	11h 49m 48s	+ 6m 44s	1:59 PM	23.7°	148.833
Mar 17, 2010	8:02 AM	7:58 PM	11h 56m 32s	+ 6m 43s	1:59 PM	24.1°	148.874
Mar 18, 2010	7:58 AM	8:01 PM	12h 03m 16s	+ 6m 44s	1:59 PM	24.5°	148.915
Mar 19, 2010	7:54 AM	8:04 PM	12h 10m 00s	+ 6m 43s	1:59 PM	24.9°	148.955
Mar 20, 2010	7:51 AM	8:07 PM	12h 16m 44s	+ 6m 43s	1:58 PM	25.3°	148.996
Mar 21, 2010	7:47 AM	8:11 PM	12h 23m 27s	+ 6m 43s	1:58 PM	25.7°	149.037
Mar 22, 2010	7:43 AM	8:14 PM	12h 30m 11s	+ 6m 43s	1:58 PM	26.1°	149.078
Mar 23, 2010	7:40 AM	8:17 PM	12h 36m 55s	+ 6m 43s	1:57 PM	26.4°	149.120
Mar 24, 2010	7:36 AM	8:20 PM	12h 43m 39s	+ 6m 44s	1:57 PM	26.8°	149.161
Mar 25, 2010	7:32 AM	8:23 PM	12h 50m 24s	+ 6m 44s	1:57 PM	27.2°	149.203
Mar 26, 2010	7:29 AM	8:26 PM	12h 57m 08s	+ 6m 44s	1:56 PM	27.6°	149.244
Mar 27, 2010	7:25 AM	8:29 PM	13h 03m 52s	+ 6m 44s	1:56 PM	28.0°	149.287
Mar 28, 2010	7:21 AM	8:32 PM	13h 10m 37s	+ 6m 44s	1:56 PM	28.4°	149.329
Mar 29, 2010	7:18 AM	8:35 PM	13h 17m 22s	+ 6m 44s	1:56 PM	28.8°	149.372
Mar 30, 2010	7:14 AM	8:38 PM	13h 24m 07s	+ 6m 45s	1:55 PM	29.2°	149.414
Mar 31, 2010	7:10 AM	8:41 PM	13h 30m 52s	+ 6m 45s	1:55 PM	29.6°	149.458

*10 Days
to Gain
back 1
hour of
day light*

All times are in local time for Fairbanks

Note that Daylight Saving Time starts on Sunday, March 14, 2010 at 2:00 AM and this is accounted for above

Sun & Moon

Nome, Alaska, United States

Date	Sunrise	Sunset	Length of day		Time	Solar noon	
			This day	Difference		Altitude	Distance (10 ⁶ km)
Mar 1, 2010	9:09 AM	7:20 PM	10h 10m 27s	+ 6m 40s	2:14 PM	18.2°	148.242
Mar 2, 2010	9:06 AM	7:23 PM	10h 17m 08s	+ 6m 40s	2:14 PM	18.6°	148.279
Mar 3, 2010	9:02 AM	7:26 PM	10h 23m 48s	+ 6m 40s	2:13 PM	18.9°	148.316
Mar 4, 2010	8:59 AM	7:29 PM	10h 30m 29s	+ 6m 40s	2:13 PM	19.3°	148.354
Mar 5, 2010	8:55 AM	7:32 PM	10h 37m 08s	+ 6m 39s	2:13 PM	19.7°	148.393
Mar 6, 2010	8:52 AM	7:35 PM	10h 43m 48s	+ 6m 39s	2:13 PM	20.1°	148.432
Mar 7, 2010	8:48 AM	7:38 PM	10h 50m 27s	+ 6m 39s	2:13 PM	20.5°	148.471
Mar 8, 2010	8:44 AM	7:42 PM	10h 57m 07s	+ 6m 39s	2:12 PM	20.9°	148.511
Mar 9, 2010	8:41 AM	7:45 PM	11h 03m 46s	+ 6m 39s	2:12 PM	21.3°	148.551
Mar 10, 2010	8:37 AM	7:48 PM	11h 10m 25s	+ 6m 39s	2:12 PM	21.6°	148.591
Mar 11, 2010	8:34 AM	7:51 PM	11h 17m 04s	+ 6m 39s	2:11 PM	22.0°	148.632
Mar 12, 2010	8:30 AM	7:54 PM	11h 23m 43s	+ 6m 38s	2:11 PM	22.4°	148.672
Mar 13, 2010	8:27 AM	7:57 PM	11h 30m 22s	+ 6m 38s	2:11 PM	22.8°	148.713
Mar 14, 2010	9:23 AM	9:00 PM	11h 37m 01s	+ 6m 38s	3:11 PM	23.2°	148.754
Mar 15, 2010	9:19 AM	9:03 PM	11h 43m 39s	+ 6m 38s	3:10 PM	23.6°	148.794
Mar 16, 2010	9:16 AM	9:06 PM	11h 50m 18s	+ 6m 38s	3:10 PM	24.0°	148.835
Mar 17, 2010	9:12 AM	9:09 PM	11h 56m 56s	+ 6m 38s	3:10 PM	24.4°	148.876
Mar 18, 2010	9:09 AM	9:12 PM	12h 03m 35s	+ 6m 38s	3:10 PM	24.8°	148.917
Mar 19, 2010	9:05 AM	9:15 PM	12h 10m 13s	+ 6m 38s	3:09 PM	25.2°	148.957
Mar 20, 2010	9:01 AM	9:18 PM	12h 16m 52s	+ 6m 38s	3:09 PM	25.6°	148.998
Mar 21, 2010	8:58 AM	9:21 PM	12h 23m 30s	+ 6m 38s	3:09 PM	26.0°	149.039
Mar 22, 2010	8:54 AM	9:24 PM	12h 30m 08s	+ 6m 38s	3:08 PM	26.4°	149.080
Mar 23, 2010	8:51 AM	9:27 PM	12h 36m 47s	+ 6m 38s	3:08 PM	26.8°	149.122
Mar 24, 2010	8:47 AM	9:30 PM	12h 43m 25s	+ 6m 38s	3:08 PM	27.2°	149.163
Mar 25, 2010	8:43 AM	9:33 PM	12h 50m 04s	+ 6m 38s	3:07 PM	27.6°	149.205
Mar 26, 2010	8:40 AM	9:36 PM	12h 56m 43s	+ 6m 38s	3:07 PM	27.9°	149.246
Mar 27, 2010	8:36 AM	9:39 PM	13h 03m 21s	+ 6m 38s	3:07 PM	28.3°	149.289
Mar 28, 2010	8:32 AM	9:42 PM	13h 10m 00s	+ 6m 38s	3:07 PM	28.7°	149.331
Mar 29, 2010	8:29 AM	9:46 PM	13h 16m 40s	+ 6m 39s	3:06 PM	29.1°	149.374
Mar 30, 2010	8:25 AM	9:49 PM	13h 23m 19s	+ 6m 39s	3:06 PM	29.5°	149.417
Mar 31, 2010	8:22 AM	9:52 PM	13h 29m 59s	+ 6m 39s	3:06 PM	29.9°	149.460

11
Days

All times are in local time for Nome

Note that Daylight Saving Time starts on Sunday, March 14, 2010 at 2:00 AM and this is accounted for above.

March Equinox (Vernal Equinox) is on Saturday, March 20, 2010 at 9:32 AM in Nome.

About the Sun Calculator

Sun & Moon

Anchorage, Alaska, United States

Rising and setting times for the Sun

Date	Sunrise	Sunset	Length of day		Time	Solar noon	
			This day	Difference		Altitude	Distance (10 ⁶ km)
Mar 1, 2010	8:00 AM	6:25 PM	10h 25m 25s	+ 5m 44s	1:12 PM	21.5°	148.240
Mar 2, 2010	7:57 AM	6:28 PM	10h 31m 10s	+ 5m 44s	1:12 PM	21.8°	148.277
Mar 3, 2010	7:53 AM	6:30 PM	10h 36m 54s	+ 5m 44s	1:11 PM	22.2°	148.314
Mar 4, 2010	7:50 AM	6:33 PM	10h 42m 39s	+ 5m 44s	1:11 PM	22.6°	148.352
Mar 5, 2010	7:47 AM	6:36 PM	10h 48m 24s	+ 5m 45s	1:11 PM	23.0°	148.391
Mar 6, 2010	7:44 AM	6:38 PM	10h 54m 10s	+ 5m 45s	1:11 PM	23.4°	148.430
Mar 7, 2010	7:41 AM	6:41 PM	10h 59m 55s	+ 5m 45s	1:10 PM	23.8°	148.469
Mar 8, 2010	7:38 AM	6:44 PM	11h 05m 40s	+ 5m 45s	1:10 PM	24.2°	148.509
Mar 9, 2010	7:35 AM	6:46 PM	11h 11m 25s	+ 5m 45s	1:10 PM	24.6°	148.549
Mar 10, 2010	7:32 AM	6:49 PM	11h 17m 11s	+ 5m 45s	1:10 PM	24.9°	148.589
Mar 11, 2010	7:29 AM	6:52 PM	11h 22m 56s	+ 5m 45s	1:09 PM	25.3°	148.630
Mar 12, 2010	7:25 AM	6:54 PM	11h 28m 42s	+ 5m 45s	1:09 PM	25.7°	148.670
Mar 13, 2010	7:22 AM	6:57 PM	11h 34m 27s	+ 5m 45s	1:09 PM	26.1°	148.711
Mar 14, 2010	8:19 AM	7:59 PM	11h 40m 13s	+ 5m 45s	2:09 PM	26.5°	148.751
Mar 15, 2010	8:16 AM	8:02 PM	11h 45m 58s	+ 5m 45s	2:08 PM	26.9°	148.792
Mar 16, 2010	8:13 AM	8:05 PM	11h 51m 43s	+ 5m 45s	2:08 PM	27.3°	148.833
Mar 17, 2010	8:10 AM	8:07 PM	11h 57m 29s	+ 5m 45s	2:08 PM	27.7°	148.874
Mar 18, 2010	8:07 AM	8:10 PM	12h 03m 14s	+ 5m 45s	2:07 PM	28.1°	148.914
Mar 19, 2010	8:03 AM	8:12 PM	12h 09m 00s	+ 5m 45s	2:07 PM	28.5°	148.955
Mar 20, 2010	8:00 AM	8:15 PM	12h 14m 45s	+ 5m 45s	2:07 PM	28.9°	148.996
Mar 21, 2010	7:57 AM	8:18 PM	12h 20m 30s	+ 5m 45s	2:07 PM	29.3°	149.037
Mar 22, 2010	7:54 AM	8:20 PM	12h 26m 16s	+ 5m 45s	2:06 PM	29.7°	149.078
Mar 23, 2010	7:51 AM	8:23 PM	12h 32m 01s	+ 5m 45s	2:06 PM	30.1°	149.119
Mar 24, 2010	7:48 AM	8:25 PM	12h 37m 46s	+ 5m 45s	2:06 PM	30.5°	149.161
Mar 25, 2010	7:44 AM	8:28 PM	12h 43m 31s	+ 5m 45s	2:05 PM	30.9°	149.202
Mar 26, 2010	7:41 AM	8:30 PM	12h 49m 16s	+ 5m 45s	2:05 PM	31.2°	149.244
Mar 27, 2010	7:38 AM	8:33 PM	12h 55m 01s	+ 5m 45s	2:05 PM	31.6°	149.286
Mar 28, 2010	7:35 AM	8:36 PM	13h 00m 46s	+ 5m 44s	2:04 PM	32.0°	149.329
Mar 29, 2010	7:32 AM	8:38 PM	13h 06m 31s	+ 5m 44s	2:04 PM	32.4°	149.371
Mar 30, 2010	7:28 AM	8:41 PM	13h 12m 16s	+ 5m 44s	2:04 PM	32.8°	149.414
Mar 31, 2010	7:25 AM	8:43 PM	13h 18m 01s	+ 5m 44s	2:03 PM	33.2°	149.457

12
Days

All times are in local time for Anchorage

Note that Daylight Saving Time starts on Sunday, March 14, 2010 at 2:00 AM and this is accounted for above.

March Equinox (Vernal Equinox) is on Saturday, March 20, 2010 at 9:32 AM in Anchorage

Sun & Moon

Juneau, Alaska, United States

Juneau is capital of the state Alaska

Rising and setting times for the Sun

Date	Sunrise	Sunset	Length of day		Time	Solar noon	
			This day	Difference		Altitude	Distance (10 ⁶ km)
Mar 1, 2010	6:52 AM	5:29 PM	10h 36m 08s	+ 5m 04s	12:10 PM	24.4°	148.238
Mar 2, 2010	6:50 AM	5:31 PM	10h 41m 14s	+ 5m 05s	12:10 PM	24.7°	148.275
Mar 3, 2010	6:47 AM	5:33 PM	10h 46m 19s	+ 5m 05s	12:10 PM	25.1°	148.312
Mar 4, 2010	6:44 AM	5:36 PM	10h 51m 25s	+ 5m 05s	12:09 PM	25.5°	148.350
Mar 5, 2010	6:41 AM	5:38 PM	10h 56m 31s	+ 5m 05s	12:09 PM	25.9°	148.389
Mar 6, 2010	6:39 AM	5:40 PM	11h 01m 37s	+ 5m 06s	12:09 PM	26.3°	148.428
Mar 7, 2010	6:36 AM	5:43 PM	11h 06m 43s	+ 5m 06s	12:09 PM	26.7°	148.467
Mar 8, 2010	6:33 AM	5:45 PM	11h 11m 50s	+ 5m 06s	12:08 PM	27.1°	148.507
Mar 9, 2010	6:30 AM	5:47 PM	11h 16m 57s	+ 5m 06s	12:08 PM	27.4°	148.547
Mar 10, 2010	6:27 AM	5:49 PM	11h 22m 04s	+ 5m 06s	12:08 PM	27.8°	148.587
Mar 11, 2010	6:25 AM	5:52 PM	11h 27m 11s	+ 5m 06s	12:08 PM	28.2°	148.628
Mar 12, 2010	6:22 AM	5:54 PM	11h 32m 18s	+ 5m 07s	12:07 PM	28.6°	148.668
Mar 13, 2010	6:19 AM	5:56 PM	11h 37m 25s	+ 5m 07s	12:07 PM	29.0°	148.709
Mar 14, 2010	7:16 AM	6:59 PM	11h 42m 32s	+ 5m 07s	1:07 PM	29.4°	148.749
Mar 15, 2010	7:13 AM	7:01 PM	11h 47m 39s	+ 5m 07s	1:06 PM	29.8°	148.790
Mar 16, 2010	7:10 AM	7:03 PM	11h 52m 46s	+ 5m 07s	1:06 PM	30.2°	148.831
Mar 17, 2010	7:08 AM	7:06 PM	11h 57m 54s	+ 5m 07s	1:06 PM	30.6°	148.872
Mar 18, 2010	7:05 AM	7:08 PM	12h 03m 01s	+ 5m 07s	1:06 PM	31.0°	148.912
Mar 19, 2010	7:02 AM	7:10 PM	12h 08m 08s	+ 5m 07s	1:05 PM	31.4°	148.953
Mar 20, 2010	6:59 AM	7:12 PM	12h 13m 15s	+ 5m 07s	1:05 PM	31.8°	148.994
Mar 21, 2010	6:56 AM	7:15 PM	12h 18m 22s	+ 5m 07s	1:05 PM	32.2°	149.035
Mar 22, 2010	6:53 AM	7:17 PM	12h 23m 29s	+ 5m 07s	1:04 PM	32.6°	149.076
Mar 23, 2010	6:51 AM	7:19 PM	12h 28m 36s	+ 5m 06s	1:04 PM	33.0°	149.117
Mar 24, 2010	6:48 AM	7:21 PM	12h 33m 43s	+ 5m 06s	1:04 PM	33.4°	149.159
Mar 25, 2010	6:45 AM	7:24 PM	12h 38m 50s	+ 5m 06s	1:04 PM	33.8°	149.200
Mar 26, 2010	6:42 AM	7:26 PM	12h 43m 56s	+ 5m 06s	1:03 PM	34.1°	149.242
Mar 27, 2010	6:39 AM	7:28 PM	12h 49m 03s	+ 5m 06s	1:03 PM	34.5°	149.284
Mar 28, 2010	6:36 AM	7:30 PM	12h 54m 09s	+ 5m 06s	1:03 PM	34.9°	149.327
Mar 29, 2010	6:33 AM	7:33 PM	12h 59m 16s	+ 5m 06s	1:02 PM	35.3°	149.369
Mar 30, 2010	6:31 AM	7:35 PM	13h 04m 22s	+ 5m 06s	1:02 PM	35.7°	149.412
Mar 31, 2010	6:28 AM	7:37 PM	13h 09m 28s	+ 5m 05s	1:02 PM	36.1°	149.455

13
Days

All times are in local time for Juneau

Note that Daylight Saving Time starts on Sunday, March 14, 2010 at 2:00 AM and this is



Blue—Currently observe DST
Orange—No longer observe DST
Red—Have never observed DST

HISTORY



Alaska State Legislature

Representative Anna Fairclough – House District 17

A Brief History of Daylight Saving Time

- Standard Time Act was established March 19, 1918. Part of this Act also legislated for the observance of daylight saving time nationwide. That section of the act was repealed the following year, and DST thereafter became a matter left up to local jurisdictions.
- In 1918, in order to conserve resources for the war effort, the U.S. Congress placed the country on Daylight Saving Time for the remainder of WW I. It was observed for seven months in 1918 and 1919. The law, however, proved so unpopular that it was later repealed.
- When America went to war again, Congress reinstated Daylight Saving Time on February 9, 1942. Time in the U.S. was advanced one hour to save energy. It remained advanced one hour forward year-round until September 30, 1945.
- From 1945 to 1966, there was no U.S. law about Daylight Saving Time. So, states and localities were free to observe Daylight Saving Time or not.
- This, however, caused confusion -- especially for the broadcasting industry, and for trains and buses. Because of the different local customs and laws, radio and TV stations and the transportation companies had to publish new schedules every time a state or town began or ended Daylight Saving Time.
- By 1966, some 100 million Americans were observing Daylight Saving Time through their own local laws and customs. Congress decided to step in end the confusion and establish one pattern across the country.
- The Uniform Time Act of 1966 created Daylight Saving Time to begin on the **last** Sunday of April and to end on the last Sunday of October. Any area that wanted to be exempt from Daylight Saving Time could do so by passing a local ordinance.
- The law was amended in 1986 to begin Daylight Saving Time on the **first** Sunday in April.

- Following the 1973 Arab Oil Embargo, Congress put most of the nation on extended Daylight Saving Time for two years in hopes of saving additional energy.
- In 1974, Daylight Saving Time lasted ten months and then in 1975 it lasted for eight months, rather than the normal six months (then, May to October).
- The extension of daylight saving time was not continued due to public opposition to late sunrise times during the winter months.
- In 1976, the United States reverted back to the schedule set in the Uniform Time Act.
- Starting March 11, 2007, DST was extended another four to five weeks, from the second Sunday of March to the first Sunday of November.

LEGISLATIVE RESEARCH REPORT

JUNE 4, 2008



REPORT NUMBER 08.269

HISTORY OF DAYLIGHT SAVINGS TIME IN ALASKA

PREPARED FOR REPRESENTATIVE ANNA FAIRCLOUGH

BY TIM SPENGLER, LEGISLATIVE ANALYST

You asked for information on the history of daylight savings time.¹ Specifically, you requested a review of legislative history regarding attempts to eliminate daylight savings time in Alaska. Additionally, you asked if there is federal money attached to staying on daylight savings time.

Daylight Saving Time (DST) was first proposed in a whimsical essay in 1784 by Ben Franklin, as a suggestion for saving candles and lamp oil on summer evenings. It was first advocated seriously in 1907 by British builder William Willett, in the pamphlet *Waste of Daylight*. Daylight Savings Time was used during both World Wars to conserve energy for the war effort. In the United States, from the end of World War II until 1966, there was no uniform national plan. Instead, states and localities determined their own DST systems. In 1966, President Johnson signed the Uniform Time Act, establishing a consistent schedule for the country.²

The Uniform Time Act (UTA) decrees that all states go on DST on the second Sunday in March and off on the first Sunday in November.³ The UTA provides that all states will be on DST unless their legislatures specifically reject it. Currently Arizona (with the exception of the Navajo reservation, which employs DST consistent with the Utah, Colorado, and New Mexico segments of the reservation) and Hawaii are the only states on standard time year round.⁴

¹ Daylight savings is a system of setting clocks ahead so that both sunrise and sunset occur at a later hour, producing an additional hour of daylight in the evening. In the North Temperate Zone, clocks are usually set ahead one hour in the spring and set back to standard time in the fall.

² We found historical background information on DST on numerous sites including *National Geographic News*, *The History of Daylight Savings*, March 31, 2006 and on the *Wikipedia* and *MSN Encarta* web sites.

³ From 1987-2006 DST commenced on the first Sunday in April and concluded on the last Sunday in October. The latest amendment to the Uniform Time Act—part of the Energy Policy Act of 2005—extended DST by four weeks in the belief that it would help conserve energy. The extended DST became effective in 2007.

⁴ Arizona has not observed DST since 1968. This is largely an energy conservation measure since the temperature in the state is extremely hot during the summer, resulting in more power usage from air conditioning units in homes and businesses. Hawaii, because of its tropical climate, would not likely benefit from daylight savings time.

Attachment A

HB 4 (1999), 21st Alaska Legislature
HB 4 (1999), Bill History/Action

HB 409 (2002), 22nd Alaska Legislature
HB 409 (2002), Bill History/Action

SB 120 (2005), 24th Alaska Legislature
SB 120 (2005), Bill History/Action

CS HB 176(STA) (2005), 24th Alaska Legislature
HB 176 (2005), Bill History/Action

HOUSE BILL NO. 4
IN THE LEGISLATURE OF THE STATE OF ALASKA
TWENTY-FIRST LEGISLATURE - FIRST SESSION

BY REPRESENTATIVES KOHRING, Davis

Introduced: 1/19/99

Referred: House Special Committee on World Trade and State/Federal Relations, Labor and Commerce

A BILL

FOR AN ACT ENTITLED

1 "An Act rejecting the use of daylight saving time."

2 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

3 * Section 1. AS 01 is amended by adding a new chapter to read:

4 Chapter 15. Standard Time.

5 Sec. 01.15.010. Exemption from daylight saving time. This state exempts
6 itself from observation of advanced time, also known as daylight saving time, between
7 2:00 a.m. on the first Sunday in April and 2:00 a.m. on the last Sunday in October in
8 each calendar year.

Bill History/Action for 21st Legislature

BILL: HB 4

SHORT TITLE: ELIMINATE DAYLIGHT SAVING TIME

BILL VERSION:

CURRENT STATUS: (H) L&C

STATUS DATE: 03/05/99

THEN RLS

SPONSOR(S): REPRESENTATIVE(S) KOHRING, Davis

TITLE: "An Act rejecting the use of daylight saving time."

Bill Number: [Display Bill](#) [Next Bill](#)

[Full Text](#) [Fiscal Notes](#) [Minutes](#)

[Display Committee Action with Bill History](#)

Jm-Date	Jm-Page	Action
01/19/99	0018	(H) PREFILE RELEASED 1/8/99
01/19/99	0018	(H) READ THE FIRST TIME - REFERRAL(S)
01/19/99	0019	(H) WTR. L&C
02/24/99	0307	(H) COSPONSOR(S): DAVIS
03/05/99	0364	(H) WTR RPT IDP 2DNP 4NR
03/05/99	0364	(H) DP: BARNES; DNP: BERKOWITZ, COWDERY;
03/05/99	0364	(H) NR: MASEK, PHILLIPS, GREEN, JOULE
03/05/99	0364	(H) ZERO FISCAL NOTE (GOV/ALL DEPTS)
03/05/99	0364	(H) REFERRED TO LABOR & COMMERCE

Similar Subject Match or Exact Subject Match
TIME ZONES

Bill Number: [Display Bill](#)

[Next Bill](#)

[Return to Basis Main Menu \(21st Legislature\)](#)

HOUSE BILL NO. 409

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SECOND LEGISLATURE - SECOND SESSION

BY REPRESENTATIVES LANCASTER BY REQUEST, Dyson, Kohring, Croft, Foster

Introduced: 2/13/02

Referred: Labor and Commerce

A BILL

FOR AN ACT ENTITLED

1 "An Act rejecting the use of daylight saving time."

2 **BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:**

3 * **Section 1.** AS 01 is amended by adding a new chapter to read:

4 **Chapter 15. Standard Time.**

5 **Sec. 01.15.010. Exemption from daylight saving time.** This state exempts
6 itself from observation of advanced time, also known as daylight saving time, between
7 2:00 a.m. on the first Sunday in April and 2:00 a.m. on the last Sunday in October in
8 each calendar year.

Bill History/Action for 22 Legislature

BILL: HB 409

SHORT TITLE: ELIMINATE DAYLIGHT SAVING TIME

BILL VERSION:

CURRENT STATUS: (H) RLS

STATUS DATE: 04/09/02

SPONSOR(S): REPRESENTATIVE(S) LANCASTER BY REQUEST, Dyson, Kohring, Croft, Foster

TITLE: "An Act rejecting the use of daylight saving time."

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[Full Text](#) [Fiscal Notes](#) [Minutes](#)
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02/13/02	2233	(H) READ THE FIRST TIME - REFERRALS
02/13/02	2233	(H) L&C
03/06/02	2496	(H) COSPONSOR(S): KOHRING
03/15/02	2563	(H) COSPONSOR(S): CROFT
03.25/02	2674	(H) COSPONSOR(S): WILSON
03/27/02	Text	(H) L&C AT 3:15 PM CAPITOL 17
03/27/02	Text	(H) -- Meeting Canceled --
04/03/02	2788	(H) COSPONSOR REMOVED: WILSON
04/04/02	2806	(H) COSPONSOR(S): FOSTER
04/08/02	Text	(H) L&C AT 3:15 PM CAPITOL 17
04/08/02	Text	(H) Moved Out of Committee
04/08/02	Text	(H) MINUTE(L&C)
04/09/02	2847	(H) L&C RPT 3DP 2NR
04/09/02	2847	(H) DP: MEYER, CRAWFORD, MURKOWSKI
04/09/02	2847	(H) NR: KOTT, HALCRO
04/09/02	2847	(H) FN1: ZERO(H,L&C)
04/09/02	2847	(H) REFERRED TO RULES

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SENATE BILL NO. 120

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-FOURTH LEGISLATURE - FIRST SESSION

BY SENATORS OLSON, Wagoner, Dyson, Stedman

Introduced: 2/28/05

Referred: Community and Regional Affairs, Labor and Commerce

A BILL

FOR AN ACT ENTITLED

1 **"An Act exempting the state and its political subdivisions from daylight saving time."**

2 **BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:**

3 * **Section 1.** AS 44.12 is amended by adding a new section to read:

4 **Article 5. Standard Time.**

5 **Sec. 44.12.400. Exemption from daylight saving time.** Under 15 U.S.C.
6 260a, this state exempts itself and all of its political subdivisions from observation of
7 advanced time, also known as daylight saving time, between 2:00 a.m. on the first
8 Sunday in April and 2:00 a.m. on the last Sunday in October in each calendar year,
9 and the entire state and all of its political subdivisions shall observe the standard time
10 that is otherwise applicable during that time period.

Bill History/Action for 24 Legislature

BILL: SB 120

SHORT TITLE: ELIMINATE DAYLIGHT SAVING TIME

BILL VERSION:

CURRENT STATUS: (S) L&C

STATUS DATE: 04-14-05

SPONSOR(S): SENATOR(S) OLSON, Wagoner, Dyson, Stedman

TITLE: "An Act exempting the state and its political subdivisions from daylight saving time."

Bill Number: [Display Bill](#) [Next Bill](#)

[Full Text](#) [Fiscal Notes](#) [Minutes](#)

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02/28/05	0414	(S) READ THE FIRST TIME - REFERRALS
02/28/05	0414	(S) CRA. L&C
03/02/05	0447	(S) COSPONSOR(S): WAGONER, DYSON, STEDMAN
04/13/05	Text	(S) CRA AT 1:30 PM BELTZ 211
04/13/05	Text	(S) Moved SB 120 Out of Committee
04/13/05	Text	(S) MINUTE(CRA)
04/14/05	0959	(S) CRA RPT 3NR IDP
04/14/05	0959	(S) NR: STEVENS G. WAGONER, STEDMAN
04/14/05	0959	(S) DP: ELLIS
04/14/05	0959	(S) FN1: ZERO(ADM)
04/14/05	0959	(S) REFERRED TO LABOR & COMMERCE

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Bill Number: [Display Bill](#)

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CS FOR HOUSE BILL NO. 176(STA)
IN THE LEGISLATURE OF THE STATE OF ALASKA
TWENTY-FOURTH LEGISLATURE - FIRST SESSION

BY THE HOUSE STATE AFFAIRS COMMITTEE

Offered: 5/5/05

Referred: Rules

Sponsor(s): REPRESENTATIVES SALMON, Kohring, Croft, Gruenberg

A BILL

FOR AN ACT ENTITLED

1 "An Act authorizing an advisory vote on whether the legislature should exempt the state
2 and its political subdivisions from daylight saving time."

3 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

4 * Section 1. The uncodified law of the State of Alaska is amended by adding a new section
5 to read:

6 ADVISORY VOTE. At the next general election, in compliance with the election
7 laws of the state, the lieutenant governor shall place before the qualified voters of the state a
8 question advisory to the legislature. Notwithstanding AS 15.60.005 relating to preparation of
9 the ballot proposition, the question shall appear on the ballot in the following form:

10 QUESTION

11 Shall the legislature exempt the state and all of its political subdivisions
12 from daylight saving time, between 2:00 a.m. on the first Sunday in April and
13 2:00 a.m. on the last Sunday in October in each calendar year, so that the state
14 and all of its political subdivisions observe the standard time that would

1 otherwise apply during that time period?

2 Yes [] No []

Bill History/Action for 24 Legislature

BILL: HB 176

SHORT TITLE: ELIMINATE DAYLIGHT SAVING TIME

BILL VERSION:

CURRENT STATUS: (H) FIN

STATUS DATE: 05-05-05

SPONSOR(s): REPRESENTATIVE(s) SALMON, Kohring, Croft, Gruenberg

TITLE: "An Act exempting the state and its political subdivisions from daylight saving time."

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02/25/05	0428	(H) READ THE FIRST TIME - REFERRALS
02/25/05	0428	(H) CRA. STA
04/07/05	Text	(H) CRA AT 8:00 AM CAPITOL 124
04/07/05	Text	(H) Moved Out of Committee
04/07/05	Text	(H) MINUTE(CRA)
04/08/05	0931	(H) CRA RPT 1DP 1DNP 3NR
04/08/05	0931	(H) DP: SALMON:
04/08/05	0931	(H) DNP: OLSON:
04/08/05	0931	(H) NR: CISSNA, KOTT, LEDOUX
04/08/05	0931	(H) FN1: ZERO(ADM)
04/23/05	Text	(H) STA AT 9:30 AM CAPITOL 106
04/23/05	Text	(H) Heard & Held
04/23/05	Text	(H) MINUTE(STA)
05/05/05	1577	(H) STA RPT CS(STA) NT 1DP 3NR 1AM
05/05/05	1577	(H) DP: SEATON:
05/05/05	1577	(H) NR: LYNN, GATTO, ELKINS:
05/05/05	1577	(H) AM: GRUENBERG
05/05/05	1577	(H) FN1: ZERO(ADM)
05/05/05	1577	(H) FN2: (GOV)
05/05/05	1631	(H) FIN REFERRAL ADDED AFTER STA
05/05/05	1631	(H) REFERRED TO FINANCE
05/05/05	Text	(H) STA AT 8:00 AM CAPITOL 106
05/05/05	Text	(H) Moved CSHB 176(STA) Out of Committee
05/05/05	Text	(H) MINUTE(STA)
03/16/06	Text	(H) FIN AT 1:30 PM HOUSE FINANCE 519
03/16/06	Text	(H) Scheduled But Not Heard
03/16/06	Text	(H) MINUTE(FIN)

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TIME ZONES

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HEALTH

Does Daylight Saving Time Conserve Energy?

Recent studies shed some light on the efficiency of seasonally changing the clocks

By Charles Q. Choi

Starting this month, roughly one quarter of the world's population will lose sleep and gain sunlight as they set their clocks ahead for daylight saving. People may think that with the time shift, they are conserving electricity otherwise spent on lighting. But recent studies have cast doubt on the energy argument—some research has even found that it ultimately leads to greater power use.

Benjamin Franklin is credited with conceiving the idea of daylight saving in 1784 to conserve candles, but the U.S. did not institute it until World War I as a way to preserve resources for the war effort. The first comprehensive study of its effectiveness occurred during the oil crisis of the 1970s, when the U.S. Department of Transportation found that daylight saving trimmed national electricity usage by roughly 1 percent compared with standard time.

Scant research had been done since, during which time U.S. electricity usage patterns have changed as air conditioning and household electronics have become more pervasive, observes economist Matthew Kotchen of the University of California, Santa Barbara. But lately, changes to daylight saving policies on state and federal levels have presented investigators new chances to explore the before-and-after impacts of the clock shift.

In 2006 Indiana instituted daylight saving statewide for the first time. (Before then, daylight time confusingly was in effect in just a handful of Indiana's counties.) Examining electricity usage and billing since the statewide change, Kotchen and his colleague Laura Grant unexpectedly found that daylight time led to a 1 percent overall rise in residential electricity use, costing the state an extra \$9 million. Although daylight time reduces demand for household lighting, the researchers suggest that it increased demand for cooling on summer evenings and heating in early spring and late fall mornings. They hope to publish their conclusions this year in the *Quarterly Journal of Economics*.

Investigators got another opportunity in 2007, when daylight time nationwide began three weeks earlier, on the second Sunday in March, and ended one week later in the fall. California Energy Commission resource economist Adrienne Kandel and her colleagues discovered that extending daylight time had little to no effect on energy use in the state. The observed drop in energy use of 0.2 percent fell within the statistical margin of error of 1.5 percent.

Not all recent analyses suggest that daylight saving is counterproductive. Instead of studying the impact daylight saving changes had on just one state, senior analyst Jeff Dowd and his colleagues at the U.S. Department of Energy investigated what effect it might have on national energy consumption, looking at 67 electric utilities across the country.

In their October 2008 report to Congress, they conclude that the four-week extension of daylight time saved about 0.5 percent of the nation's electricity per day, or 1.3 trillion watt-hours in total. That amount could power 100,000 households for a year. The study did not just look at residential electricity use but commercial use as well, Dowd says.

The disparities between regional and national results could reflect climate differences between states. "The effect we saw could be even worse in Florida, where air conditioning is used heavily," Kotchen suggests.

If time shifting turns out to be an energy waster, should the sun set on daylight saving? Certainly that would please farmers, who have long opposed it for how it disrupts their schedules. The chances, though, appear nil. "I'm skeptical we could change daylight saving time on a national level, because we've become accustomed to it," Kotchen says, adding that "we might want to consider it for other costs or benefits it could have." Retailers, especially those involved with sports and recreation, have historically argued hardest for extending daylight time. Representatives of the golf industry, for instance, told Congress in 1986 that an extra month of daylight saving was worth up to \$400 million annually in extra sales and fees.

So instead of worrying about cranking up the air conditioner at home, think about what more you can do outdoors when the sun is out. Softball, anyone?

Moving the Hands Is Bad for the Heart

Springing forward may both end and save lives. Researchers at the Karolinska Institute in Stockholm and their colleagues looked at myocardial infarction rates in Sweden since 1987 and found that the number of heart attacks rose about 5 percent during the first week of daylight saving time (called summer time in Europe). In the October 30, 2008, New England Journal of Medicine, they suggest that this rise may result from the disruption of sleep patterns and biological rhythms.

On the other hand, the clock shift could help prevent traffic accidents by enabling more people to drive home in sunlight. By analyzing 28 years of U.S. automobile crash data, RAND Corporation economists and their colleagues suggest that a 1986 change in federal daylight saving time law—which moved the start of daylight time from the last Sunday in April to the first—produced an 8 to 11 percent drop in crashes involving pedestrians and a 6 to 10 percent dip in crashes for vehicular occupants. They reported the findings in a 2007 B.E. Journal of Economic Analysis & Policy study.

Editor's Note: This story was originally printed with the title "Spring Forward or Not?"

(page 1591), the second sentence should have begun with "Subtypes and sub-subtypes."

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The challenge of HIV-1 subtype diversity. *N Engl J Med* 2008; 358:1590-602.

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3. Retraction: Molecular epidemiology and prevalence of drug resistance-associated mutations in newly diagnosed HIV-1 patients in Cameroon. *Antivir Ther* 2008;13:845. (Also available at http://www.intmedpress.com/images/File/Retraction_Nkengafac.pdf.)

Shifts to and from Daylight Saving Time and Incidence of Myocardial Infarction

TO THE EDITOR: More than 1.5 billion men and women are exposed to the transitions involved in daylight saving time: turning clocks forward by an hour in the spring and backward by an hour in the autumn. These transitions can disrupt chronobiologic rhythms and influence the duration and quality of sleep, and the effect lasts for several days after the shifts.^{1,2}

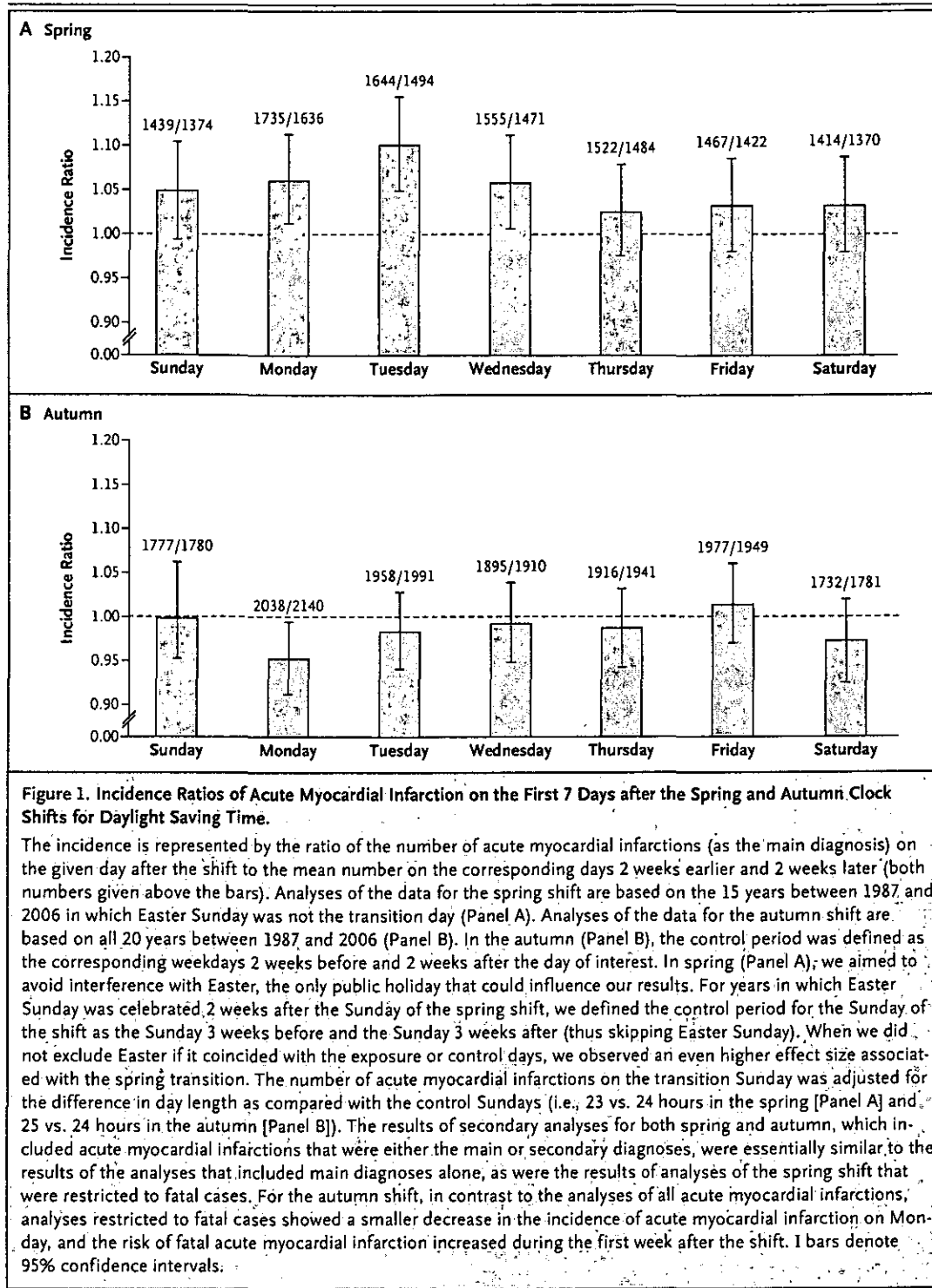
We examined the influence of these transitions on the incidence of acute myocardial infarction. To calculate the incidence ratio, we compared the incidence of acute myocardial infarction during each of the first 7 days after the spring or autumn transition and the mean of the incidences on the corresponding weekdays 2 weeks before and 2 weeks after the day of interest. For example, for the Tuesday after the transition, we would have divided the incidence on that Tuesday by the mean of the incidence on the Tuesday 2 weeks earlier and the incidence on the Tuesday 2 weeks later. We used data from the Swedish registry of acute myocardial infarction, which provides high-quality information on all acute myocardial infarctions in the country since 1987. The incidence ratios, as measures of relative risk, and exact 95% confidence intervals were calculated.

The incidence of acute myocardial infarction was significantly increased for the first 3 weekdays after the transition to daylight saving time in the spring (Fig. 1A). The incidence ratio for the first week after the spring shift, calculated as the incidence for all 7 days divided by the mean of the weekly incidences 2 weeks before and 2 weeks after, was 1.051 (95% confidence interval [CI], 1.032 to 1.071). In contrast, after the transition out of daylight saving time in the autumn, only the first weekday was affected significantly (Fig. 1B); the incidence ratio for the whole week was 0.985 (95% CI, 0.969 to 1.002).

The effect of the spring transition to daylight saving time on the incidence of acute myocardial infarction was somewhat more pronounced in women than in men, and the autumn effect was more pronounced in men than in women. The separate analyses of the 1987-1996 and 1997-2006 periods yielded essentially the same results as those for the whole 1987-2006 period. The effects of transitions were consistently more pronounced for people under 65 years of age than for those 65 years of age or older.

The most plausible explanation for our findings is the adverse effect of sleep deprivation on cardiovascular health. According to experimental studies, this adverse effect includes the predominance of sympathetic activity and an increase in proinflammatory cytokine levels.^{3,4} Our data suggest that vulnerable people might benefit from avoiding sudden changes in their biologic rhythms.

It has been postulated that people in Western societies are chronically sleep deprived, since the average sleep duration decreased from 9.0 to 7.5 hours during the 20th century.⁴ Therefore, it is important to examine whether we can achieve beneficial effects with prolonged sleep. The finding that the possibility of additional sleep seems to be protective on the first workday after the autumn shift is intriguing. Monday is the day of the week associated with the highest risk of acute myocardial infarction, with the mental stress of starting a new workweek and the increase in activity suggested as an explanation.⁵ Our results raise the possibility that there is another, sleep-related component in the excess incidence of acute myocardial infarction on Monday. Sleep-diary studies suggest that bedtimes and wake-up times are usually later on weekend days than on weekdays; the earlier wake-up times on the first workday of the week and the consequent minor sleep deprivation



vation can be hypothesized to have an adverse cardiovascular effect in some people. This effect would be less pronounced with the transition out of daylight saving time, since it allows for additional sleep. Studies are warranted to examine the

possibility that a more stable weekly pattern of waking up in the morning and going to sleep at night or a somewhat later wake-up time on Monday might prevent some acute myocardial infarctions.

CORRESPONDENCE

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The Human Circadian Clock's Seasonal Adjustment Is Disrupted by Daylight Saving Time

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Summary

A quarter of the world's population is subjected to a 1 hr time change twice a year (daylight saving time, DST). This reflects a change in social clocks, not environmental ones (e.g., dawn). The impact of DST is poorly understood. Circadian clocks use daylight to synchronize (entrain) to the organism's environment. Entrainment is so exact that humans adjust to the east-west progression of dawn within a given time zone [1]. In a large survey ($n = 55,000$), we show that the timing of sleep on free days follows the seasonal progression of dawn under standard time, but not under DST. In a second study, we analyzed the timing of sleep and activity for 8 weeks around each DST transition in 50 subjects who were chronotyped (analyzed for their individual phase of entrainment [2]). Both parameters readily adjust to the release from DST in autumn but the timing of activity does not adjust to the DST imposition in spring, especially in late chronotypes. Our data indicate that the human circadian system does not adjust to DST and that its seasonal adaptation to the changing photoperiods is disrupted by the introduction of summer time. This disruption may extend to other aspects of seasonal biology in humans.

Results and Discussion

Despite the fact that ~1.6 billion people experience DST, few studies have investigated the impact of DST transitions on physiology and behavior. One found no effect on psychiatric disorders [3]. Others studied the effect on traffic accidents with inconsistent results [4–7]. Behavioral studies accompanying subjects across DST transitions are rare. The first study (65 subjects; 6 days prior to and 11 days after the autumn change) showed full adjustment of wake-up times after 5 days [8]. The second study recorded sleep EEGs and concluded that sleep architecture adjusts within several days to the spring DST transition [9]. The largest study (101 subjects) found instantaneous adjustment of bedtimes after both transitions, while wake-up times took about 1 week [10]. The longest study, so far (4 weeks around the

spring change), found interindividual differences in adjustment (ranging from 1–2 days up to 2 weeks) [11] but no effects for the autumn change [12]. The first study [13, 14] considering different time-of-day preferences in their subjects (by the morningness-eveningness scale [15]) found a reduction in sleep duration by ~1 hr after the spring transition for morning and evening types. Whereas activity times adjusted immediately, sleep times took a week.

Studying the effects of DST transitions essentially investigates the potential re-entrainment of individuals to a new social schedule and should, therefore, consider chronotype (an individual's phase of entrainment), which differs substantially within a given population [2]. Depending on genotype [16], gender, age [17], and light exposure, our clocks will adopt a different phase relationship to dawn. We have developed a simple tool, the Munich ChronoType Questionnaire (MCTQ; see Experimental Procedures and Supplemental Data available online) to assess chronotype in a highly quantitative manner.

Assessment of how the human clock adjusts to DST transitions at nonequatorial latitudes is confounded by the fact that the times of dawn and dusk also change. Dawn times (see gray area in Figure 1) change rapidly around the spring DST transition (which often occurs close to the March equinox) and change to a lesser extent around the autumn transition (which often occurs more than a month after the September equinox). Given that daylight (including the low light levels at dawn) is the predominant zeitgeber for our circadian system [1, 19, 20], it is unlikely that it readily adjusts to the abrupt and purely social DST transitions.

We investigated the adaptation of the human circadian clock to both season and DST with two approaches. First, we mined the MCTQ database (containing ~55,000 subjects from Central Europe, including the date of entry) for seasonal changes in sleep timing at the population level. Second, we conducted a longitudinal study to describe the adaptation to DST transitions at the individual level (50 subjects investigated for 4 weeks before and 4 weeks after both the autumn and the spring transition in 2006 and 2007, respectively).

Mining the MCTQ database shows that midsleep on free days, MSF correlates with dawn under standard time, whereas it is scattered around 3:30 under DST (Figure 1A). Notably, the onset of DST elicits no significant change in sleep timing, whereas a large delay follows the offset of DST. Self-reported sleep duration changed significantly across seasons (by ~20 min; Figure 1B).

To understand the dynamics of how individuals respond to DST transitions, we evaluated both the phase of sleep (as midsleep, calculated from sleep logs) and the phase of activity (as center of activity, CoAct, calculated from wrist actimetry; see Experimental Procedures). Figure 2 shows how an individual's activity profile reflects early or late chronotype. The individual

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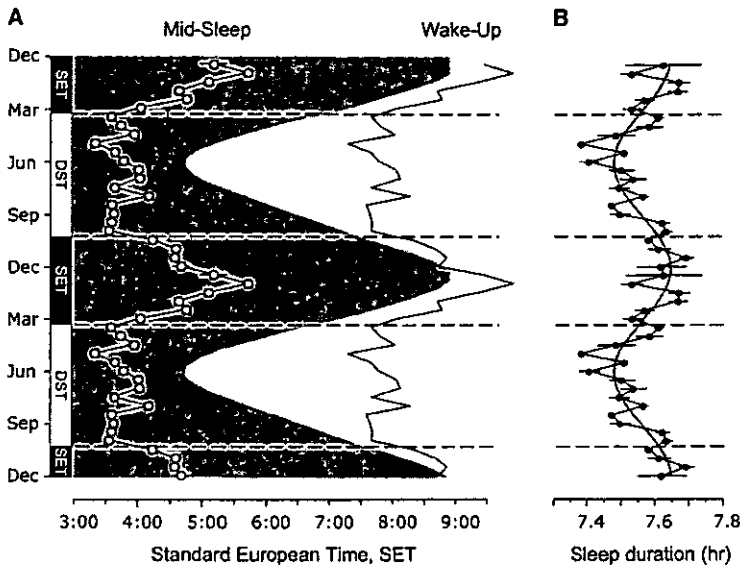


Figure 1. Seasonality in Sleep Timing Taken from the MCTQ Database

Annual time courses are double plotted (the same data are shown sequentially to more easily visualize systematic trends) ($n \approx 55,000$). (A) Half-monthly averages of midsleep times on free days (filled circles), MSF (open circles \pm SEM), and of wake-up times (line). DST periods are indicated by the open boxes and their transitions by dashed horizontal lines; dawn times are shown as a gray to white border. Whereas sleep times track down under standard time, midsleep is scattered around 3:30 (wake-up times around 7:40) under DST. Age and sex ratio were not significantly different in the 24 averages and showed no interactions. (B) Seasonal changes in sleep duration (filled circles; averaged over both free and work days \pm SEM) result in about 20 min more sleep in winter than in summer (cosine fit: $r = 0.75$; $p < 0.0001$).

weekly phase deviations from baseline are averaged for both markers (separately for free and work days) either for the entire cohort (Figure 3A) or for the different chronotype groups (Figure 3B; see legend for statistical analysis). The timing of midsleep and CoAct for all subjects on free days fully adjusted to the release from DST in autumn within 1 week (top left in Figure 3A). On workdays, this acute response of CoAct was less pronounced, followed by a gradual change over the four post-transition weeks (top right in Figure 3A). Whereas both midsleep and CoAct on workdays showed a constant (social) phase before the release from DST, they paralleled dawn thereafter, similar to the results shown in Figure 1A.

The spring transition was anticipated by midsleep on free days (hence, a reduced acute post-transition phase

jump; Figure 3A). This was even more pronounced for the timing of activity (CoAct gradually advanced for 5 consecutive weeks) and indicates that the human clock tracks dawn as photoperiod increases. However, 2 weeks into DST, CoAct delayed again and settled at an advance of less than 30 min (final relative phase; see Experimental Procedures). Both midsleep and CoAct on workdays tracked the social clock before the spring change as they did in autumn. Whereas midsleep fully adjusted on workdays (60% of the subjects indicated using an alarm clock on workdays), the incomplete advance of CoAct on free days was similar for workdays.

Different chronotypes respond differently to time changes. Most people (except for extreme early chronotypes) adjust more readily to delays than to advances, i.e., they suffer less from jet lag after westward than after

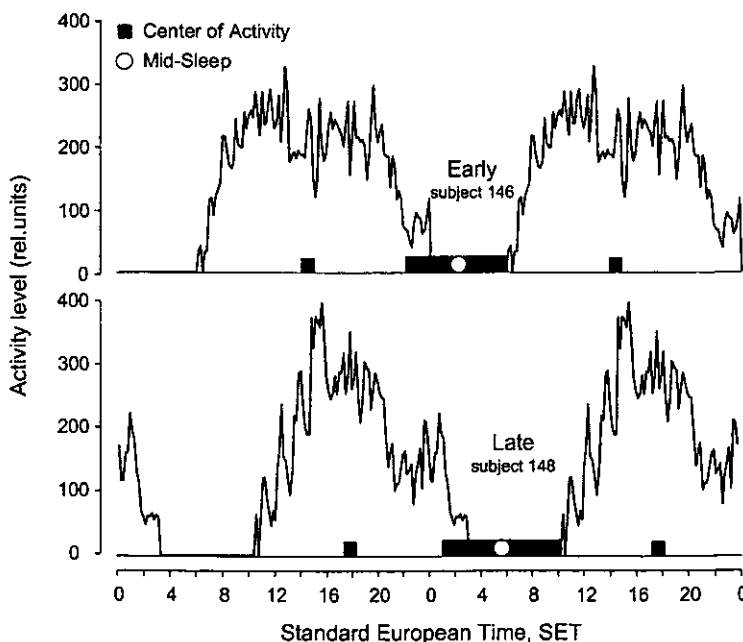


Figure 2. Comparison of Sleep Times and Activity Profiles between Different Chronotypes

Sleep times (black bars) and activity (black lines)—recorded during the two longitudinal studies around the autumn and the spring DST transition—averaged for the free days within the 4 weeks before the autumn change in an early (top) and a late (bottom) chronotype. Sleep onset and offset times are taken from the sleep logs; activity levels were measured by wrist actimetry. The phase of mid-sleep is indicated by an open circle within the sleep bar and the phase of the center of activity (CoAct, see Experimental Procedures) as a black square. Chronotype correlated highly with the CoAct at baseline (see Experimental Procedures; $r = 0.56$, $p < 0.0001$). Sleep log entries also correlated with the sleep times extracted from the activity records similarly for both transitions (for the autumn: sleep-onset_{before}: $r = 0.38$, $p < 0.001$; sleep-end_{before}: $r = 0.7$, $p < 0.001$; sleep-onset_{after}: $r = 0.22$, $p < 0.005$; sleep-end_{after}: $r = 0.55$, $p < 0.001$).

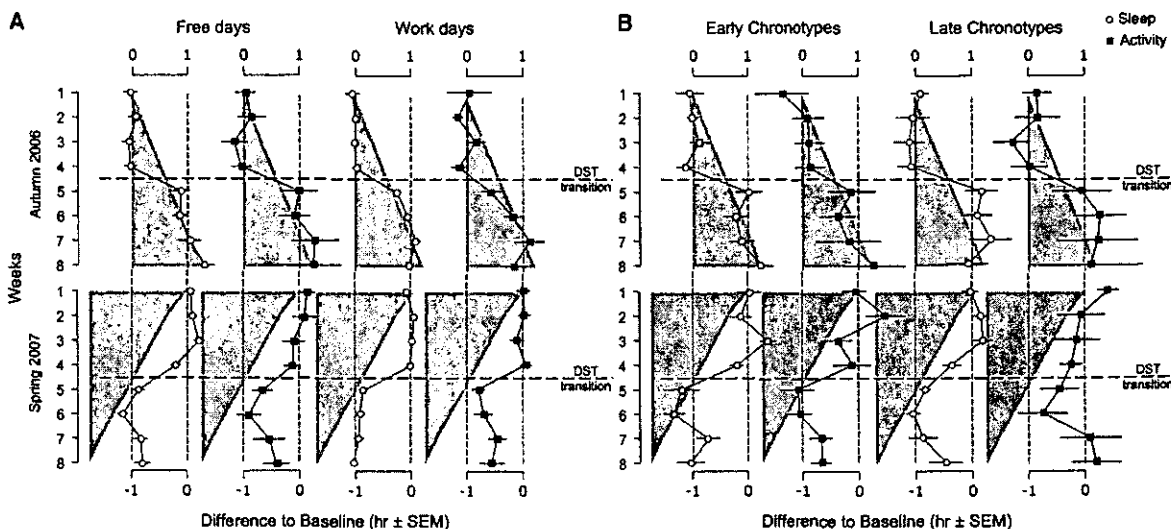


Figure 3. Adjustments to DST Transitions of Sleep and Activity Times Resulting from the Longitudinal Study

(A) Phase adjustments of midsleep (circles) and activity (CoAct, black squares) around the DST transitions expressed as weekly averages relative to each individual's baseline (average phase during the four pretransition weeks, see Experimental Procedures). Results are shown for the entire cohort both on free (left) and on work (right) days. The autumn transition is shown in the top panels; the spring transition is in the bottom panels. Horizontal bars connected to the respective symbols represent SEM, which were in most cases smaller than the size of the symbols. $n = 50$. (B) The comparison between early (left) and late (right) chronotypes is shown for free days only (otherwise as in [A]). For the changes of midsleep on free days in autumn, a mixed ANOVA (within-subject design with chronotype [early, intermediate, and late] as a between-subject factor) shows a significant difference between all weeks ($F(4.33;117) = 10.00, p < 0.001$). For both transitions, post-hoc tests show that neither the 4 pre- nor the 4 post-transition weeks differ among each other, whereas they differ significantly across the transitions. In autumn, the CoAct times show no difference between the 8 weeks ($F(3.5; 94) = 1.89, p = .13$). The changes for CoAct of early chronotypes correlates better with dawn than with social time ($r: 0.938$ versus 0.896). In spring, the phase changes of both midsleep and CoAct differ significantly before versus after the transition (mixed-design ANOVA; midsleep: $F(4.57; 128) = 20.26, p \leq .001$; CoAct: $F(4.84;170) = 4.36, p \leq .001$), whereas they are statistically indifferent among the pre- and post-transition weeks. The changes for CoAct of late types between week 1 and 6 correlate better with dawn than with social time ($r: 0.974$ versus 0.774). Whereas post-hoc tests show that the final phases reached in the last two weeks show no significant difference relative to any of the 4 weeks prior to transition for both chronotypes, they differ significantly between early and late types ($t(49) = 2.13, p \leq 0.05$).

eastward flights [21]. A similar pattern is suggested for DST transitions [13, 14]. Our results show that adjustment to DST transitions is chronotype specific (Figure 3B). We present results only for early and late chronotypes here ("larks" and "owls;" those for intermediate chronotypes lie predictably in between the two extremes) and concentrate on the less socially influenced free days. Midsleep in both larks and owls showed a large phase jump in response to the autumn delay (compare with Figure 1A); the response of the CoAct suggests that owls delay more readily than larks (at a level below significance). The chronotype-specific differences are more marked after the spring change. Again, both midsleep and CoAct moved with dawn before the transition to DST (compare with Figure 1A), most prominently in the late chronotypes who gradually advanced their CoAct for five consecutive weeks (compare with Figure 3A). Midsleep of larks readily adjusted while an apparent full adjustment in owls was transient. Whereas larks advanced their CoAct by only 40 min, owls failed to adjust their CoAct to the advance of the social clock.

The similarity between the longitudinal study (50 individuals followed across the DST transitions) and those found in the database is remarkable (compare Figures 3A and 3B with Figure 1A). In both cases, the human circadian clock tracks dawn under standard time but not under DST. Whereas the human clock (as measured by

the CoAct) predictably advances from autumn to spring (15:54 SET, averaged between Nov 19 and Dec 3, compared to 15:14 SET, averaged between Mar 24 and Apr 21), it remains locked to the same time between spring and autumn (14:36 SET for both, averaged between Apr 15-29 and Oct 3-28, respectively). These results, in combination with those from the database, suggest that the incomplete adjustment of activity in larks and the nonadjustment in owls continues beyond the four recorded post-transition weeks and throughout the months of DST. Our results also suggest that the circadian clock does not adjust to the DST transition in spring—especially in late types. Notably, the strongest reduction of average sleep duration (for 8 consecutive weeks; Figure 1B) follows the spring transition.

What could trigger the severe effect of DST on seasonal adaptation of the human clock? It is unlikely that midsleep tracks dawn throughout the summer, especially at higher latitudes. It is, however, equally unlikely that the abrupt cessation of dawn tracking, shown here, reflects a threshold beyond which the clock cannot advance (corresponding to a wake-up time around 7:30 SET, 8:30 DST). We have previously shown that the human clock is predominantly entrained to the natural light-dark cycle ($zeitgeber_N$) and that social time affects this entrainment [1]. Behaviorally induced light-dark cycles (e.g., by sleeping in a dark room with our eyes closed; $zeitgeber_B$) may compete with $zeitgeber_N$,

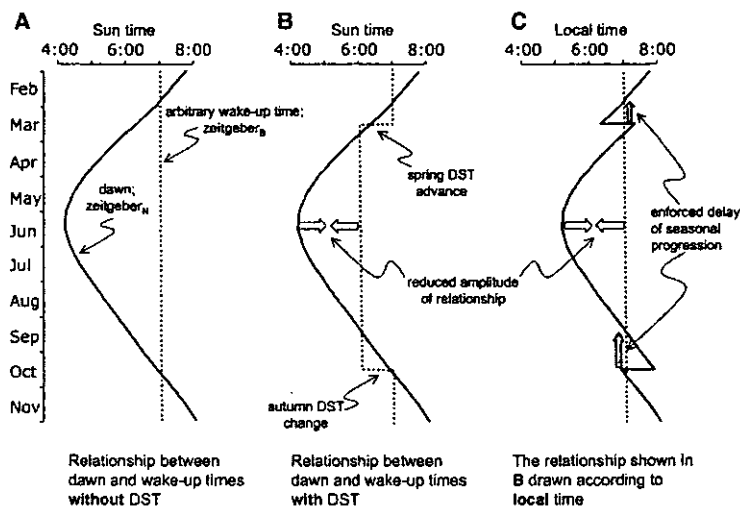


Figure 4. Relationship between Natural and Behavioral Light-Dark Cycles with and without DST. The relationship between the natural light-dark cycle (dawn, zeitgeber_N; solid curve) and the behavioral light-dark cycle (created by the use of artificial light and sleeping in dark rooms with closed eyes, zeitgeber_B, exemplified by an arbitrary wake-up time at 7 a.m.; dotted line) changes systematically with season (A). DST affects only zeitgeber_B by advancing the social clock by 1 hr in spring and delaying it in autumn (B). The 1 hr advance corresponds to traveling 15° westward within the same time zone. DST transitions have large effects on the seasonal relationship between the two zeitgebers. This phenomenon becomes more apparent if natural dawn is drawn with respect to local time (consistent with social wake-up times) (C). The seasonal progression of the phase relationship between the two zeitgebers is delayed by 4 weeks in the spring and by 6 weeks in the autumn (vertical gray arrows). Hence, we repeat almost 20% of the seasonal progression of the two zeitgebers every year. In addition, DST artificially changes the amplitude of the phase relationship in summer (horizontal white arrows in [B] and [C]), which mimics a translocation of 17° latitude. The diagrams are drawn for the dawn times in Frankfurt/Main (50°7'N/8°41'E), which roughly corresponds to the average coordinates of the 50 subjects' places of residence. In this case, the longitudinal and latitudinal translocations would mean moving from Frankfurt to Morocco in spring and back in autumn. The amplitude of the relationships as well as the degree of their perturbations by DST increase with latitude.

especially in large cities where people efficiently shield themselves from environmental signals. We show here that zeitgeber_B (sleep time, represented by midsleep) adjusts to DST, and therefore the "small" 1 hr time change induced by DST may have a much larger effect on our biological timing system (Figure 4). The seasonal progression in phase relationship between the two zeitgebers is pushed back by the equivalent of 4 and 6 weeks in spring and autumn, respectively. The large autumn setback is reflected in the sudden, strong delay (Figures 1A, 3A, and 3B). Assuming that the clock tracks dawn similarly in spring and autumn, the current transition from DST to standard time in late October is scheduled 1 month too late. In addition, DST reduces the seasonal amplitude of the relationship between the two zeitgebers (Figures 4B and 4C). DST-induced changes are theoretically equivalent to geographical translocations. The amplitude of the relationships as well as the degree of their perturbations by DST increase with latitude (notably, all equatorial countries either never introduced or abandoned DST). The examples shown in Figure 4 are based on the location of Frankfurt. The 1 hr DST advance in spring corresponds to traveling 15° westward and the reduction of amplitude corresponds to traveling 17° latitude southward. Thus, DST translocates the inhabitants of Central Germany to Morocco in spring and back in autumn, without changing time zone or climate.

In some animals, the circadian clock adopts a fixed phase in long photoperiods under laboratory conditions while they track dawn in short photoperiods [22, 23]. The interruption of seasonal adjustment in summer shown here, however, exactly coincides with the DST transitions and, therefore, suggests an additional effect of DST rather than a purely natural phenomenon. This would mean that DST severely affects our seasonal timing. Like other animals, humans are seasonal [24, 25]

(in birth rates, mortality, suicide rates, etc.). However, seasonality in humans has drastically declined in industrialized countries over the last 60 years [26]. The main reason for this is probably increased shielding from natural zeitgebers, but DST might constitute an additional factor for the dissociation of human biology from the seasons.

Experimental Procedures

Subjects, Study Design, and Instruments

The study included the autumn DST transition (night of Oct 28/29, 2006; study period, Oct 3–Dec 3) and the spring DST transition (night of Mar 24/25, 2007; study period, Feb 19–Apr 29). Volunteers (autumn: n = 51, 34 F/29 M; spring: n = 49, 32 F/17 M; age: 18–59 yr, mean 34.5 yr) were recruited by word of mouth from Germany, Italy, Switzerland, France, Slovakia, The Netherlands, and Luxembourg. 43 subjects participated in both transitions and 6 new subjects were recruited for the spring study. Prerequisites were informed consent, regular daytime employment, no diagnosed psychiatric diseases or sleep disorders, and no traveling during the study periods. Delivery of questionnaires, logs, and actimeters were scheduled 1 week prior to the actual start of each study period, so that all participants were able to complete the full 8 weeks in autumn and spring. As a reward, subjects participated in a lottery, whereby any subject could win 250 EUR in each study period.

At the onset, participants completed an abbreviated version of the Munich ChronoType Questionnaire [2] (MCTQ; see Supplemental Data), which we developed to assess chronotype in a highly quantitative manner. The questionnaire contains questions about sleep times on both work and free days. Chronotype is then expressed as the time of midsleep on free days (MSF) because free-day schedules are less confounded by social obligations such as regimented work. The MSF is corrected for sleep debt accumulated over the work week (MSF_{sc}). MSF_{sc} is a reliable marker for chronotype and correlates significantly with the daily rhythms of activity and physiology (e.g., melatonin, cortisol, or body temperature, recorded in constant routines) [18].

Every morning, directly after awakening, the following items were estimated and entered into the supplied sleep logs (see Supplemental Data): time spent outside during the prior day, bedtime, time of

preparing for sleep, sleep latency, subjective alertness at bedtime (0 to 10), time of wake up, time of getting up, use of an alarm clock, subjective sleep quality (0 to 10), subjective alertness at wake up (0 to 10), and whether it was the morning of a work or a free day. Time spent outside did not significantly contribute to DST adjustment, possibly because no significant differences were found in time spent outside among the subjects. All subjects continually wore waterproof actimeters (Daqto-meter by Daqtxi GbR, Oetzen Germany) around their wrists, storing movement accelerations every minute. Subjects kept a protocol indicating when not wearing the actimeter.

Data Analysis

Sleep and activity data were analyzed separately for work and free days (in many subjects, free days were not restricted to weekends, and some subjects also worked on Saturday or Sunday). Data were also analyzed separately for three chronotype groups based on mid-sleep on free days corrected for sleep debt (MSF_{sc}) as determined by the MCTQ (early: $MSF_{sc} < 3.5$, $N_{autumn}/N_{spring} = 11/12$; intermediate: $n = 20/16$; late: $MSF_{sc} > 4.5$, $n = 19/15$) [1]. As a single reference point for sleep, daily mid-sleep times were calculated from the sleep logs and were averaged for each week. Activity data, from wake up to sleep onset (as determined by the activity profiles), were consolidated to 10 min bins and also averaged for each week (the Sunday after the actual time change was excluded). For the determination of the activity's phase, we chose the center of gravity method [27] (CoAct), which is independent of the individual shape of the activity profile (see gray areas and squares in Figure 2). For further analysis, the weekly phases of both mid-sleep and CoAct for each subject were expressed as deviation from their average over the 4 weeks preceding each of the transitions (baseline). An additional average was calculated for weeks 7 and 8 in each study period (final relative phase). Figure 3A shows the averaged deviations from baseline of the entire cohort, and Figure 3B shows those for the three groups of chronotypes.

Supplemental Data

Two figures are available at <http://www.current-biology.com/cgi/content/full/17/22/1996/DC1/>.

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Research article

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Transitions into and out of daylight saving time compromise sleep and the rest-activity cycles

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Abstract

Background: The aim of this study was to analyze the effects of transition out of and into daylight saving time on the rest-activity cycles and sleep. Rest-activity cycles of nine healthy participants aged 20 to 40 years were measured around transitions out of and into daylight saving time on fall 2005 and spring 2006 respectively. Rest-activity cycles were measured using wrist-worn accelerometers. The participants filled in the Morningness-Eveningness and Seasonal Pattern Assessment Questionnaires before starting the study and kept a sleep diary during the study.

Results: Fall transition was more disturbing for the more morning type and spring transition for the more evening type of persons. Individuals having a higher global seasonality score suffered more from the transitions.

Conclusion: Transitions out of and into daylight saving time enhanced night-time restlessness and thereby compromised the quality of sleep.

Background

Daylight saving time (DST) is commonly used worldwide and affects millions of people annually. It equals to one-hour time zone crossing eastward in the spring and westward in the fall. In the European Union, DST currently begins on the last Sunday of March, when the clocks are turned forwards by one hour, and ends on the last Sunday of October, when the clocks are turned backwards by one hour. The rationale for DST is to improve the match between the daylight hours with the activity peaks of a population. Fall transition out of DST increases the available daylight in the morning by one hour. Spring transition into DST leads to an increase of the available daylight in the evening. In our previous studies, we found that transition into daylight saving time may disrupt the rest-

activity cycle in healthy adults [1,2]. Herein, our aim was to assess the daily rest-activity cycles together with night-time sleep at transitions out of and into daylight saving time in healthy adults. Our goal was to find out whether the changes induced by transition into DST were similar in fall and spring.

Results

Fall: before versus after transition

The movement and fragmentation index ($P = 0.01$; $Z = -2.52$) was increased in all the participants after the transition (Table 1). Sleep efficiency ($P = 0.02$; $Z = -2.38$) and relative amplitude ($P = 0.02$; $Z = -2.43$) were reduced in all except one participant after transition.

Table 1: Actigraphic data on sleep and the rest-activity cycles from fall 2005 (before versus after DST transition).

FALL	Mean/before	95% confidence interval/before	Standard deviation/before	Mean/after	95% confidence interval/after	Standard deviation/after	Significance
Sleep efficiency (%)	86.33	80.80 – 91.87	6.62	79.76	74.79 – 84.72	5.94	0.006
Movement and fragmentation index	23.13	16.50 – 29.75	7.92	35.66	26.02 – 43.30	9.14	0.003
Relative amplitude	0.93	0.90 – 0.96	0.36	0.85	0.74 – 0.96	0.14	0.055
Intra-daily stability	0.58	0.47 – 0.70	0.15	0.57	0.42 – 0.72	0.19	0.880
Intra-daily variability	0.83	0.73 – 0.93	0.13	0.82	0.67 – 0.97	0.19	0.857

Spring: before versus after transition

The movement and fragmentation index ($P = 0.01$; $Z = -2.52$) was increased after transition (Table 2). Sleep efficiency was not reduced significantly after the spring transition.

Fall before versus spring before

To see whether there was any difference in the baseline conditions, we compared the scores before the two transitions. There was none.

Sleep and rest-activity cycles in relation to MES and GSS

For the participants, the mean (SD and 95% CI) MES was 53.00 (6.75 and 47.82 to 58.18) and the mean (SD and 95% CI) GSS was 9.11 (5.75 and 4.69 to 13.53). Adjustments to transitions out of and into daylight saving time were not accurate or complete four days afterwards (see Figures 1, 2, 3, 4, 5, 6, 7 and 8). The spring transition was more harmful for the more evening type of persons, as the intra-daily stability was reduced more ($P = 0.02$; $r = -0.80$) among those with a lower MES. On fall such effect was not seen. Both transitions were more harmful for those persons having greater seasonal changes in mood and behavior. After the fall transition, the movement and fragmentation index was increased more ($P < 0.05$; $r = -0.72$) among those with a higher GSS.

Discussion

Our main finding was that transitions into and out of daylight saving time disrupted night-time sleep. The movement and fragmentation index was increased significantly after both transitions, on average by 54% in fall and 37%

in spring. There is a small reservation while using movement and fragmentation index as it still is slightly unclear parameter [3]. However our experience is that movement and fragmentation index reflects well the quality of sleep. Unexpectedly, sleep efficiency was reduced after the transition out of DST only. The durations of slow-wave sleep stages tends to decrease and those of rapid-eye-movement sleep to increase during winter [4]. Transitions out of DST may affect sleep efficiency more than those into DST due to these underlying changes in sleep stages.

Moreover, the relative amplitude of the daily rest-activity cycles was decreased after the transition out of DST, not after the transition into DST. This may bear relevance to the circadian pacemaker whose function is affected by physical exercise and sleep stages [5,6]. Shortage of daylight in the morning during winter challenges the regulation of the circadian clockwork and keeps favoring its natural propensity for phase delays. This shortfall can be overcome by the increased responsiveness to light exposure [7] but may not be counteracted effectively enough among individuals predisposed to depressive disorder [8]. We found herein that individuals having higher global seasonality scores had more disruptions in their rest-activity cycles after the transitions. They may thus be more predisposed to such changes in general but in particular under conditions which challenge the circadian pacemaker, e.g. after shift work schedules or time zone crossings.

We found that the transition out of DST was more detrimental to individuals with the preference to morning

Table 2: Actigraphic data on sleep and the rest-activity cycles from spring 2006 (before versus after DST transition).

SPRING	Mean/before	95% confidence interval/before	Standard deviation/before	Mean/after	95% confidence interval/after	Standard deviation/after	Significance
Sleep efficiency (%)	87.29	83.26 – 91.23	4.82	83.78	76.51 – 91.06	8.70	0.161
Movement and fragmentation index	20.93	15.82 – 26.05	6.12	28.68	18.82 – 38.55	11.80	0.019
Relative amplitude	0.94	0.92 – 0.96	0.03	0.91	0.88 – 0.95	0.05	0.140
Intra-daily stability	0.64	0.53 – 0.76	0.15	0.62	0.49 – 0.75	0.17	0.313
Intra-daily variability	0.92	0.76 – 1.10	0.20	0.84	0.66 – 1.02	0.24	0.354

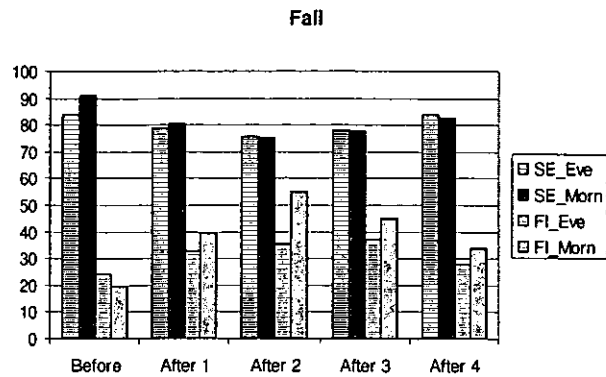


Figure 1
Changes in sleep efficiency (SE) and movement and fragmentation index (FI) in MES-subgroups/Fall. Before = mean for four days before transition, After 1,2,3 and 4 = means for the days after transition. Eve = MES-subgroup evening type, Morn = MES-subgroup morning type.

activities. Also Kantermann et al. noticed in their recent study that the timing of activity does not adjust to the DST imposition in spring, especially in late chronotypes [9]. This was unexpected, since the fall transition brings one more hour light to the mornings. However, this option to have earlier light exposure may not materialize at all or not be enough to maintain the daily rest-activity cycle and night-time sleep undisturbed. To visualize, the sunrise to sunset times were 8:35 to 17:32 prior to the transition, and 7:38 to 16:29 one day and 7:40 to 16:26 two days after the transition.

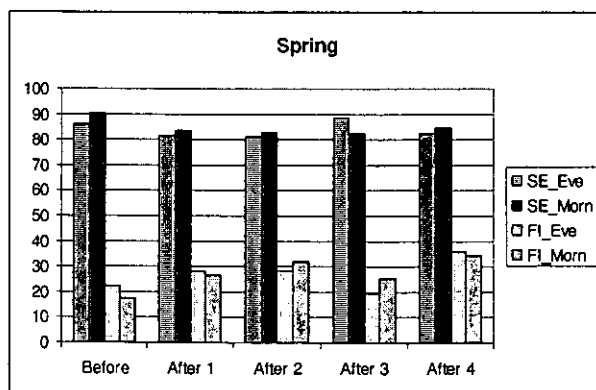


Figure 2
Changes in sleep efficiency (SE) and movement and fragmentation index (FI) in MES-subgroups/Spring. Before = mean for four days before transition, After 1,2,3 and 4 = means for the days after transition. Eve = MES-subgroup evening type, Morn = MES-subgroup morning type.

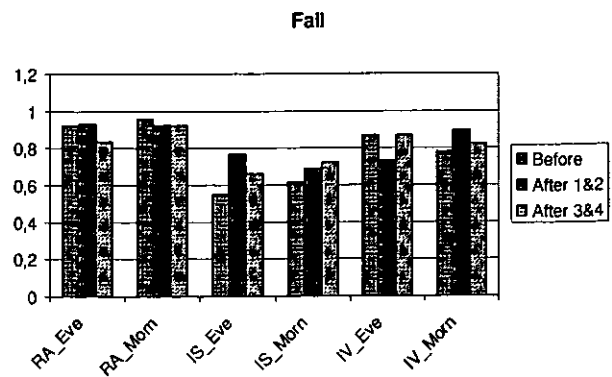


Figure 3
Changes in relative amplitude (RA), intra-daily stability (IS) and intra-daily variability (IV) in MES-subgroups/Fall. Before = mean for four days before transition, After 1&2 is mean for two days after transition, After 3&4 = is mean for the days three and four after transition. Eve = MES-subgroup evening type, Morn = MES-subgroup morning type.

In contrast, the transition into DST affected more those with the preference to evening activities. This may have been due to the longer exposure to light in the evening which is known to delay the phase position of the circadian rhythms and their subsidiary rest-activity cycles. To visualize, the sunrise to sunset times were 6:07 to 18:46 prior to the transition, and 7:04 to 19:49 one day and 7:01 to 19:51 two days after the transition.

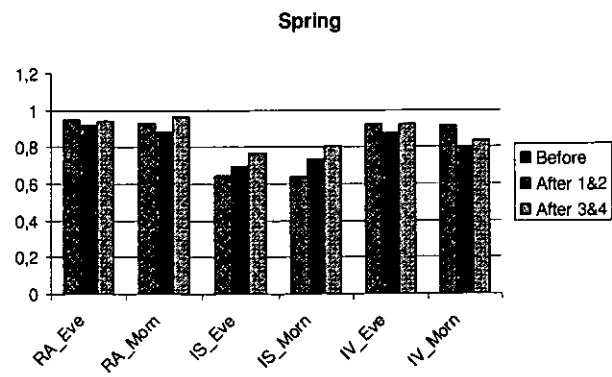


Figure 4
Changes in relative amplitude (RA), intra-daily stability (IS) and intra-daily variability (IV) in MES-subgroups/Spring. Before = mean for four days before transition, After 1&2 is mean for two days after transition, After 3&4 = is mean for the days three and four after transition. Eve = MES-subgroup evening type, Morn = MES-subgroup morning type.

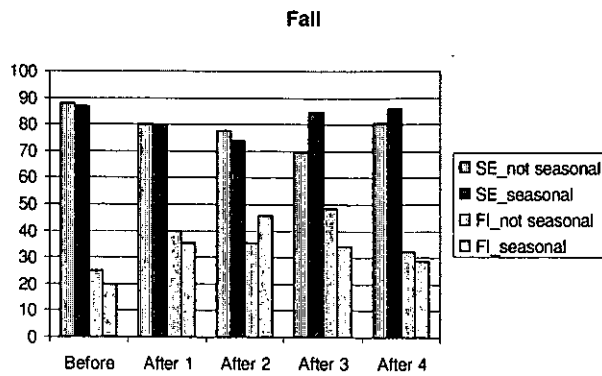


Figure 5
Changes in sleep efficiency (SE) and movement and fragmentation index (FI) in GSS-subgroups/Fall.
 Before = mean for four days before transition, After 1,2,3 and 4 = means for the days after transition. Not seasonal = GSS-subgroup not seasonal, seasonal = GSS-subgroup seasonal.

Our findings herein on healthy individuals now show that night-time sleep and the rest-activity cycles are compromised after DST transitions. Earlier, it has been demonstrated that even moderate changes in the timing of the sleep-wake cycle may have profound effects on subsequent mood in healthy young persons [10]. The impact of these twice-a-year transitions on night-time sleep and the daily rest-activity cycles may be more detrimental among patients with mood disorders or circadian rhythm sleep

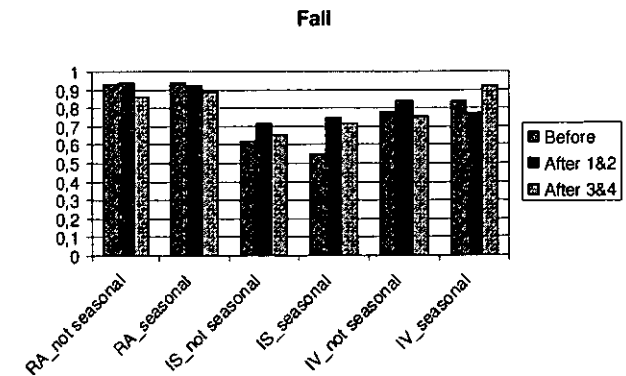


Figure 7
Changes in relative amplitude (RA), intra-daily stability (IS) and intra-daily variability (IV) in GSS-subgroups/Fall.
 Before = mean for four days before transition, After 1&2 is mean for two days after transition, After 3&4 = is mean for the days three and four after transition. Not seasonal = GSS-subgroup not seasonal, seasonal = GSS-subgroup seasonal.

disorders. Therefore, our findings need replication and extension on bigger as well as clinical samples.

Both animal and human studies have demonstrated that the principal clock can be reset with light exposure. Light exposure in the morning (as after fall transitions) advances the phase position of circadian rhythms, whereas light exposure in the evening (as after spring tran-

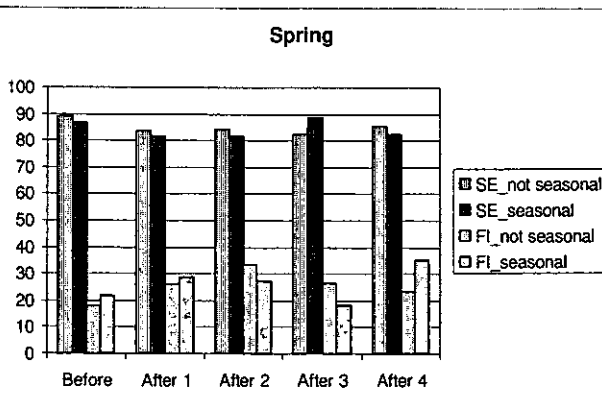


Figure 6
Changes in sleep efficiency (SE) and movement and fragmentation index (FI) in GSS-subgroups/Fall.
 Before = mean for four days before transition, After 1,2,3 and 4 = means for the days after transition. Not seasonal = GSS-subgroup not seasonal, seasonal = GSS-subgroup seasonal.

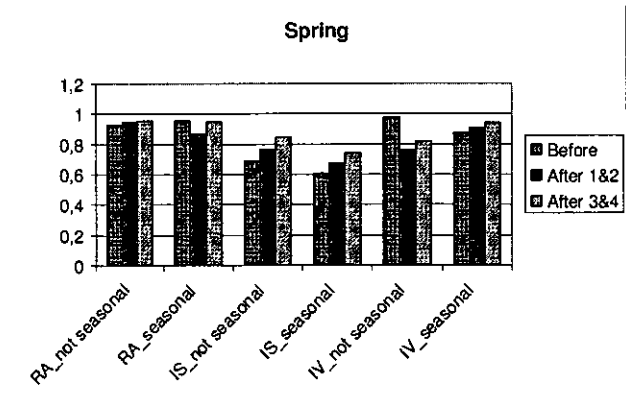


Figure 8
Changes in relative amplitude (RA), intra-daily stability (IS) and intra-daily variability (IV) in GSS-subgroups/Spring.
 Before = mean for four days before transition, After 1&2 is mean for two days after transition, After 3&4 = is mean for the days three and four after transition. Not seasonal = GSS-subgroup not seasonal, seasonal = GSS-subgroup seasonal.

sitions) delays the phase position [11]. The principal clock generating the endogenous rhythms is located in the suprachiasmatic nuclei of the anterior hypothalamus in the brain [12,13]. Light-dark transitions are the most important time-giver for this clock. Optimal sleep quality is achieved when the desired sleep time is aligned with the timing of the endogenous circadian rhythm of sleep and wake propensity [14].

Conclusion

Transitions out of and into daylight saving time enhance night-time restlessness and compromise the quality of sleep. They may thereby affect mood in a negative way and be a concern for individuals with mood disorder in particular.

Methods

For the study we had nine actigraphs. The study participants, aged 20–40, were eight women and one man. They were healthy and free of psychotropic medication. All were living in the capital area of Finland (60° 12'N), and none was shift-worker nor crossed time zones during the study. All the participants gave a written informed consent. Participants were asked to retain their normal and regular daily schedule during the study. Identical measurement protocols were carried out twice on the same individuals, each wearing an exclusive accelerometer or actigraph (Actiwatch-Plus[®], Cambridge Neurotechnology Ltd, Cambridgeshire, UK) throughout both study periods.

In fall 2005, DST was started 30 October at 3 a.m. Rest-activity cycles were measured for a period from 24 October to 3 or 10 November, thus yielding data for one week before and one (6 participants) or two (3 participants) weeks after the transition. In spring 2006, DST was started on 26 March at 3 a.m. Rest-activity cycles were measured for a period from 20 March to 3 April, thus yielding data for one week before and one week after the transition. The participants wore the units for all the time, except during short non-waterproof activities. The units were mounted in the non-dominant wrist and positioned using a standardized protocol, recording the intensity, amount and duration of movement in all directions over 0.05 g, with the sampling epoch of 30 sec. The sampling frequency of the units was 32 Hz at maximum, the filters being set from 3 to 11 Hz.

The participants filled in the Morningness-Eveningness Questionnaire [15]. Morningness-Eveningness Questionnaire (MEQ) is a self-report instrument for the assessment of the preference for the daily activity patterns whose sum yields the Morningness-Eveningness Score (MES), ranging from 16 to 86. The highest score indicates the definite preference of activities in the morning (morningness), whereas the lowest one indicates the definite preference of

activities in the evening (eveningness). Participants also filled in the Seasonal Pattern Assessment Questionnaire [16]. Seasonal Pattern Assessment Questionnaire (SPAQ) is a self-report instrument for the assessment of the seasonal changes in the length of sleep, social activity, mood, weight, appetite, and energy whose sum yields the Global Seasonality Score (GSS), ranging from 0 to 24. Both SPAQ and MEQ were filled in before the study entry.

The week measured before and the week measured after the transitions were used for analysis. Sleep efficiency (actual sleep time divided by time in bed), sleep latency, actual sleep time (assumed sleep minus wake time), actual wake time, mean score in active periods, mean length of immobility, the movement and fragmentation index, bedtime and get-up time were analyzed with the software provided by the manufacturer (The Actiwatch Sleep Analysis 2001 software). Relative amplitude, intra-daily variability, and intra-daily stability were assessed using the non-parametric circadian rhythm analysis. The circadian period was assessed using fast Fourier transform analysis. All these variables were calculated for the weekdays (Monday to Thursday) before and for those after the transitions. We excluded the weekend (Friday to Sunday) from analysis. The participants kept a sleep diary. Each morning the participants marked down the time of awakening on that morning and the time of falling asleep the night before. Sleep diaries were used as assistance while doing the actigraphic analysis. Naps were scored using the Actiwatch Sleep Analysis software.

Five of the variables (the movement and fragmentation index, sleep efficiency, relative amplitude, intra-daily variability, intra-daily stability) were considered the outcome measures as decided a priori. Statistical significance was tested using non-parametric tests for two related samples [17]. Because of multiple tests, we counted a conservative Bonferroni correction (0.05 divided by 5) and considered the P values of <0.01 to be significant and those of >0.01 to <0.05 to be indicative of significance.

Authors' contributions

TAL made contributions to the analysis and interpretation of data and to the drafting and writing of the manuscript. SL participated in the planning of the study, in the analysis of data, and in the drafting of the manuscript. JL participated in the planning of the study and in the drafting of the manuscript. TP participated in the planning of the study, in the analysis of data, and in the drafting of the manuscript. All authors read and approved the manuscript.

Acknowledgements

The study was supported in part by grants from Academy of Finland (#201097 and #210262 to TP), and by a donation from GlaxoSmithKline to scientific work at the Institute.

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SCHOOLS

Daylight Savings Time

Franklin A. Cook

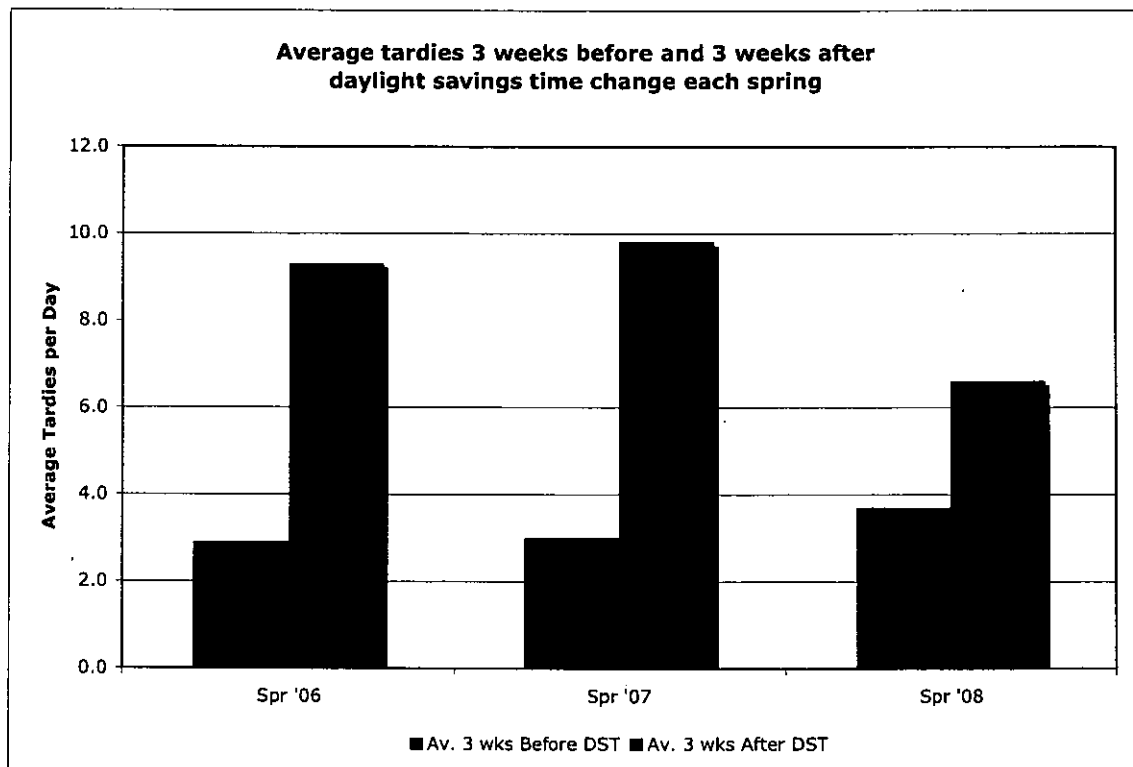
People are mostly diurnal biological creatures. That means that most of us will feel natural activity cycles of being sleepy or alert depending on the sunlight. People can overcome this and fight against it in order to be active during the time of their own choice by will power and/or by use of drugs (like caffeine). It can be difficult, but because of our location in the world this is even more difficult for us. If you go by solar time then in the winter solar time and clock time are pretty much the same for people in Anchorage, Fairbanks, and Juneau. During the summer solar time for them is just one hour earlier than clock time (clock says noon, but it is really about 11 AM). One hour is not a very difficult adjustment. For us it is different.

We are 400+ miles to the West. During the winter we are already an hour and 50 minutes earlier than clock time (clock says noon, but it is really about 10:10 AM). Now we are participating in daylight savings time and there is a two hour and 50 minute difference between what the clock says and the biological signals we get from our environment (the sun). Now when the clock says noon the actual solar time is about 9:10 AM. That is almost three hours earlier! If you ever felt like you should be having breakfast at noon instead of lunch now you know why. If a parent is finding it hard to get their child to school on time at 8:30 government time when their biological clock is telling them that it is really closer to 5:30 in the morning it begins to make more sense. Think about it.

Would we still be participating in daylight savings time if there were a three hour difference in Anchorage and Juneau? I would like to see them all set their clocks to spring forward two additional hours and see how well they adjust.

Lewis Angapak Memorial School Over a Three Year Period

	Av. 3 wks Before DST	Av. 3 wks After DST
Spr '06	2.9	9.3
Spr '07	3.0	9.8
Spr '08	3.7	6.6



Improving student attendance has been one of my greatest challenges as a school administrator. The change to daylight savings time each spring is not a simple and meaningless inconvenience in western Alaska. It is a detriment to my efforts to improve attendance. As can be seen in the graph above; the number of students coming to school late often triples after the time change. It is frustrating to have the state seemingly working against my efforts by supporting this useless time change every spring.

Franklin A. Cook
 Site Administrator
 Lewis Angapak Memorial School
 Tuntutuliak, Alaska

----- Original Message -----

From: Jeff Friedman

To: Representative Kurt Olson@legis.state.ak.us ;

Representative John Coghill@legis.state.ak.us ;

Representative Mike Chenault@legis.state.ak.us ;

Representative Mark Neuman@legis.state.ak.us ; Representative Bob Lynn@legis.state.ak.us

; Representative Bob Buch@legis.state.ak.us ;

Representative Lindsey Holmes@legis.state.ak.us

Cc: representative anna fairclough@legis.state.ak.us ; crystal.koeneman@legis.state.ak.us ;

kim_skipper@legis.state.ak.us ; Mike Doogan

Sent: Sunday, March 15, 2009 8:01 PM

Subject: Repeal of Daylight Savings Time

Dear Chair Olson and Members of the Labor and Commerce Committee:

I am writing in support of HB 19 which would repeal use of Daylight Savings Time in Alaska. This bill will be heard by the House Labor and Commerce committee this week.

Our biological clocks are reset each day when the sun reaches its highest point in the sky. In Anchorage, that occurs at about 1:00 PM in the winter months (because we previously consolidated time zones for the State). During Daylight Savings Time, that occurs at 2:00 PM. This makes it particularly difficult for teenagers to wake up on time for school. They are already going through changes that make it hard for them to go to bed early and we have our time zone set different than solar time to add to the problem. Daylight Savings exacerbates the problem.

Studies have also shown an increase in accidents around the time we set our clocks ahead in the spring and the increase is greater than any decrease for setting clocks back in the fall. This is because people tend to be tired for a week after setting our clocks ahead. Tired people make more mistakes, thereby causing more accidents. This same week of being tired effects school children just before they take their high stakes tests in the spring.

While staying on standard time would make us be one hour further from the east coast, we would be one hour closer to Asia. Alaska is part of a global economy. People are just as likely to be doing business with Japan as they are New York. With the internet, 24 hour communication is becoming the norm, and

people understand that responses may come in at odd hours measured by local time.

The one problem that would occur with repealing DST is that we would change our time in relation to other places twice a year. This also happens in Arizona. I have not heard that it has been a problem there even though Arizona is also a big tourist destination. People can and will learn to cope with the time differences. People who routinely do business with offices in other states are free to adjust their own work schedules to be in their offices earlier if they wish.

Jeff Friedman
1534 D Street
Anchorage, AK 99501

Comeau_Carol

From: Petersen_Larry
Sent: Tuesday, October 28, 2008 11:05 AM
To: Comeau_Carol, Vakalis_George
Cc: Gardner_Rhonda
Subject: RE: Daylight savings time

Hi Carol and George,

We would be delighted to eliminate daylight savings time. Every year, twice a year, we must visit schools to eliminate issues related to clocks not properly adjusting to the change. Despite computerized presets, we still have issues and spend time adjusting intercoms, bells, clocks, ventilation systems, computers, cell phones and lighting. Reflecting further, what advantage is it for Alaskans when it's dark when we go to work and dark when we go home? That one hour makes no difference to us. Larry

From: Comeau_Carol
Sent: Monday, October 27, 2008 1:17 PM
To: Level I; Level II
Cc: Siegfried_Robin
Subject: Daylight savings time

I have had an inquiry from a legislator wanting to know what our opinion is on any impacts on our schools or activities if daylight savings time was eliminated. Can you email any concerns and comments to Robin by Friday, October 31. Thanks.
Carol

Carol Comeau, Superintendent
Anchorage School District
5530 E. Northern Lights Blvd.
Anchorage, AK 99504
Phone: 907-742-4312 Fax: 907-742-4318
comeau_carol@asdk12.org

"There can be no keener revelation of a society's soul than the way in which it treats its children "
Nelson Mandela

10/28/2008

Siegfried_Robin

From: Graff_Ed
Sent: Thursday, October 30, 2008 5:32 PM
To: Siegfried_Robin
Subject: Re: Daylight savings time

Hi, Robin! We've surveyed elementary principals and received minimal feedback on the impact to schools or activities with eliminating daylight savings.

Here are two of the more substantive comments:

In the winter (actually autumn), it makes it darker as school is getting out, making it dark both in the morning and after school; in the spring, the extra daylight makes students more hyperactive and sends a signal that school is virtually over.

As for Alaska, we are in the dark most of the winter—so either it is 10-3 daylight hours with DST where it could possibly be a little safer for a while for kids to walk to school and if we changed it to 11-4 daylight hours with no DST then it would make it a little safer for elementary kids to walk home. I think activities go on regardless and we start gaining light after Dec.

Please let me know if you need further information!

Ed

From: Comeau_Carol <Comeau_Carol@asdk12.org>
Date: Mon, 27 Oct 2008 13:16:33 -0800
To: Level I <LevelI@asdk12.org>, Level II <LevelII@asdk12.org>
Cc: Siegfried_Robin <Siegfried_Robin@asdk12.org>
Conversation: Daylight savings time
Subject: Daylight savings time

I have had an inquiry from a legislator wanting to know what our opinion is on any impacts on our schools or activities if daylight savings time was eliminated. Can you email any concerns and comments to Robin by Friday, October 31.

Thanks.
Carol

Carol Comeau, Superintendent
Anchorage School District
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Phone: 907-742-4312 Fax: 907-742-4318
comeau_carol@asdk12.org

"There can be no keener revelation of a society's soul than the way in which it treats its children."
Nelson Mandela

10/30/2008

Siegfried_Robin

From: Mew_Mark
Sent: Monday, October 27, 2008 6:13 PM
To: Siegfried_Robin
Subject: FW: Daylight savings time

Robin:

All the CCTV Digital Video Recorders are preprogrammed to convert to and from daylight savings time at the appointed instants. The last time the feds adjusted the date it threw us into fits. The first year we had bad time stamps on all frames until the former official switch date arrived. That might have been 2 or 3 weeks; I don't remember exactly. Then the problem self corrected. The next year we didn't want to have that same headache, so went around at some expense and reprogrammed all the DVRs. Now if the state cancels daylight savings time we will have the same bad time stamps—messing up investigations for six months this time—or we will have to spend even more money to go fix things yet again.

Every time somebody dinks with this it costs us big bucks. I'm sure there are plenty of other systems like CCTV that are time-dependent. I often have to work with burglar alarm systems, and access control systems, and I don't know if or how they handle these changes. Larry and I.T. have lots of systems too. This could be like a mini Y2K. Feel free to tell Juneau that in my humble opinion, it 'aint broke so don't fix it, and if they just have to fix it anyway they should cover our costs. This should not be an unfunded mandate. I don't gather we are the ones asking for this.

There might be a safety issue with kids going home in the dark, at least maybe kids who stay for after school activities. I say may, because I am not sure and I realize it could be a wash if we pick up extra light in the morning. I would defer to Steve on this issue.

Mark

From: Comeau_Carol
Sent: Monday, October 27, 2008 1:17 PM
To: Level I; Level II
Cc: Siegfried_Robin
Subject: Daylight savings time

I have had an inquiry from a legislator wanting to know what our opinion is on any impacts on our schools or activities if daylight savings time was eliminated. Can you email any concerns and comments to Robin by Friday, October 31. Thanks. Carol

Carol Comeau, Superintendent
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"There can be no keener revelation of a society's soul than the way in which it treats its children."
 Nelson Mandela

10/28/2008

Middle School Comments:
Impact of the Elimination of Daylight Savings Time

In favor of the elimination of DST

Principal comments:

1. I think it would be great to eliminate daylight savings time. The switch in the fall isn't so bad, but the switch in the spring is difficult for many kids and adults in Alaska. Kids take about 2 weeks to readjust, and between the increasing light anyway, the extra daylight in the evenings, and the spring fever in general, it detracts from the energy that should still be going into keeping the schedule and routine of school going until the end of the term.
2. The consensus at Mears is that it affects kids in a negative way to have daylight savings time. 100% consensus here that we would like to get rid of it!
3. It would improve the school - we want to get rid of it. Kids and staff are always tired the week following a change like that so it would increase learning to ban DST.
4. The only impacts that I can see to affect the school would be positive. I see staff members and students having additional time in the evening to be outside, in the sunshine and lightness. I see them coming to school more rejuvenated and chipper. I think we'd see less referrals, higher attendance, and higher achievement. (This is for both staff and students). Also - in the spring-time when we traditionally go off of DST, we would no longer have tired students, would have higher attendance that week, and everyone would be in a better mood. I just don't see any negatives for our school.

Staff comments:

1. I don't think it would matter at all. I'm all for eliminating it
2. I say we fall back and keep it that way forever and ever. No change after this last one.
3. Just listen to the news every day after a time change and remember what we'd save - missed work, no missed appointments...the list goes on.
4. I think it would be very helpful. In the past, there have been times when the spring Daylight savings time-change has happened at the same time as the high stakes standardized testing. That was detrimental to our students, especially our secondary students, because they were having to be awake and coherent an

10/31/08

hour earlier than their bodies were accustomed to. That is an extra burden when it is already a biological challenge for some adolescents to wake up early.

5. When we shifted onto Yukon Time back in the 80s we went onto a "de facto" daylight savings time. Right now we have a "double daylight savings time" in the summer with solar noon occurring just before 2:00 PM. I think going back to standard time is an excellent idea, and it makes even more sense in the lower 48 where there will be a lot of avoided air conditioning costs. I don't see many impacts. It would be a great thing! I never understood how "falling back" one hour during the fall and "springing forward" in the spring really changes anything in terms of day-light savings.

Potential Negative impact if DST is eliminated

Staff comments:

1. I never could figure out WHY we observed Daylight Savings Time here in Alaska, especially with all the daylight we have in the summer time. However, if Alaska doesn't observe it, and the rest of the country does, then we will be isolated even more by time, making us maybe even 6 hours apart from some cities in the Lower 48.

10/31/08

Lower Kuskokwim School District Resolution

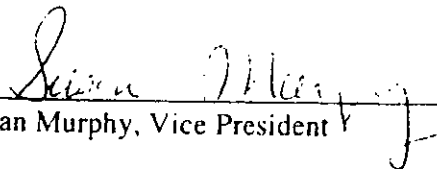
09-04

RESOLUTION ON DAYLIGHT SAVINGS TIME

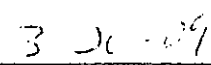
- WHEREAS,** the Lower Kuskokwim School District Board of Education is concerned about the education of the students in the State of Alaska; and
- WHEREAS,** the State of Alaska has established high academic standards for our students; and
- WHEREAS,** our students must be well rested for maximum academic performance; and
- WHEREAS,** the State of Alaska requires all students to take the Standards Based Assessments; and
- WHEREAS,** these tests determine the success or failure of AYP in the State of Alaska; and
- WHEREAS,** these tests are often administered after the state changes to Daylight Savings time, in the spring; and
- WHEREAS,** Daylight Savings Time means an additional hour of daylight and students are playing instead of sleeping at night.

NOW, THEREFORE BE IT RESOLVED that the Lower Kuskokwim School District Board of Education requests that the State of Alaska Legislature pass legislation that Alaska remain on Standard Time year round.

PASSED THIS 13th DAY OF MARCH, 2009



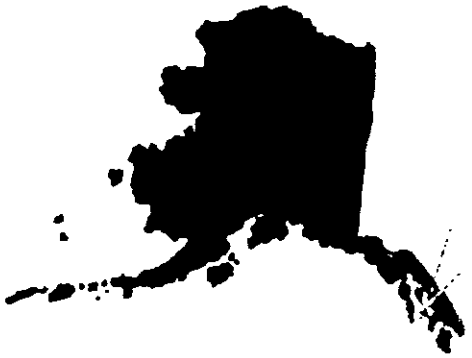
Susan Murphy, Vice President



Date

Gary Baldwin, Superintendent of Schools

Date



**WRANGELL
PUBLIC SCHOOLS**
DISTRICT OFFICE

P.O. BOX 2319
WRANGELL, ALASKA 99929
Telephone (907) 874-2347
Fax # (907) 874-3137

GATEWAY TO THE STIKINE

February 19, 2009

Honorable Representative Anna Fairclough
Alaska State Capitol Room 411
Juneau, AK 99801

Dear Representative Fairclough:

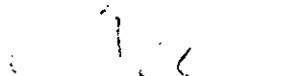
Thank you for bringing the issue of Daylight Savings Time to us. After discussion with the school board members and school administration, we would like to provide you with feedback in opposition to repealing Daylight Saving Time.

According to the school principals, there are no adverse effects to our students when we switch to Daylight Savings Time.

Being on Daylight Savings Time with the majority of the United States makes it easier for us to conduct business with schools and companies in other states. Our school board and staff like the consistency of knowing the amount of time difference without having to factor in the fact that we did not switch to Daylight Savings Time with the majority of the rest of the nation.

Please accept this letter OPPOSING the repeal of Daylight Savings Time. Thank you.

Sincerely,


Georgiarina Buhler
School Board President

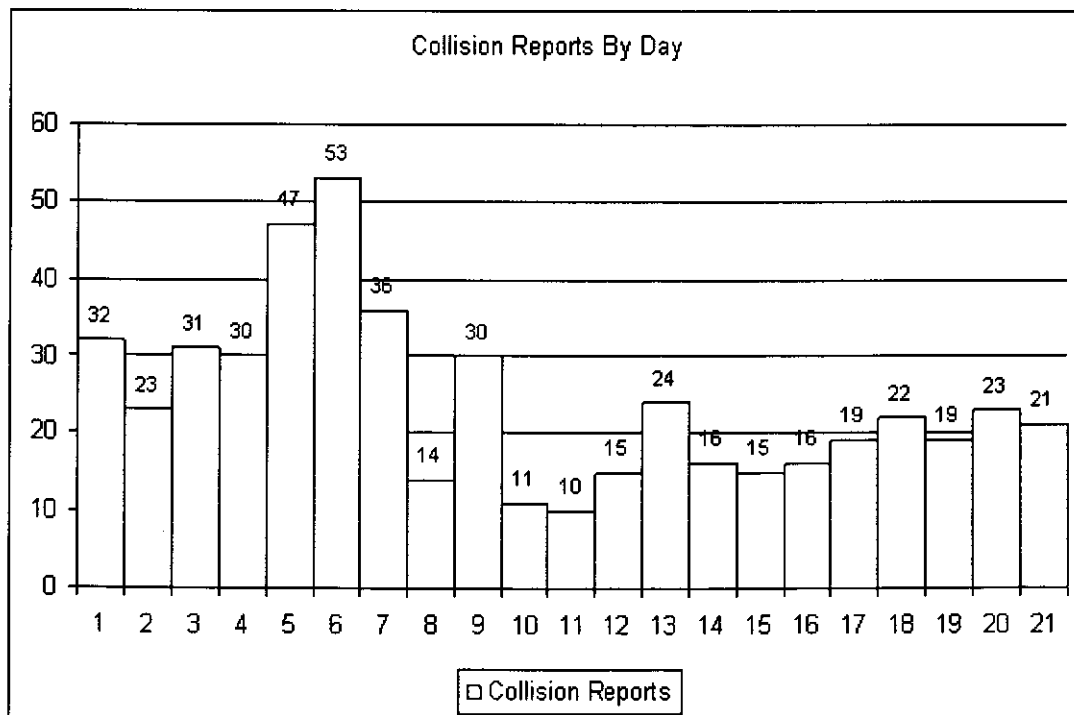
GB: kp
Cc: Representative Peggy Wilson
Cc: Senator Bert Stedman

SAFETY

Crime Analysis – Anchorage Police Department

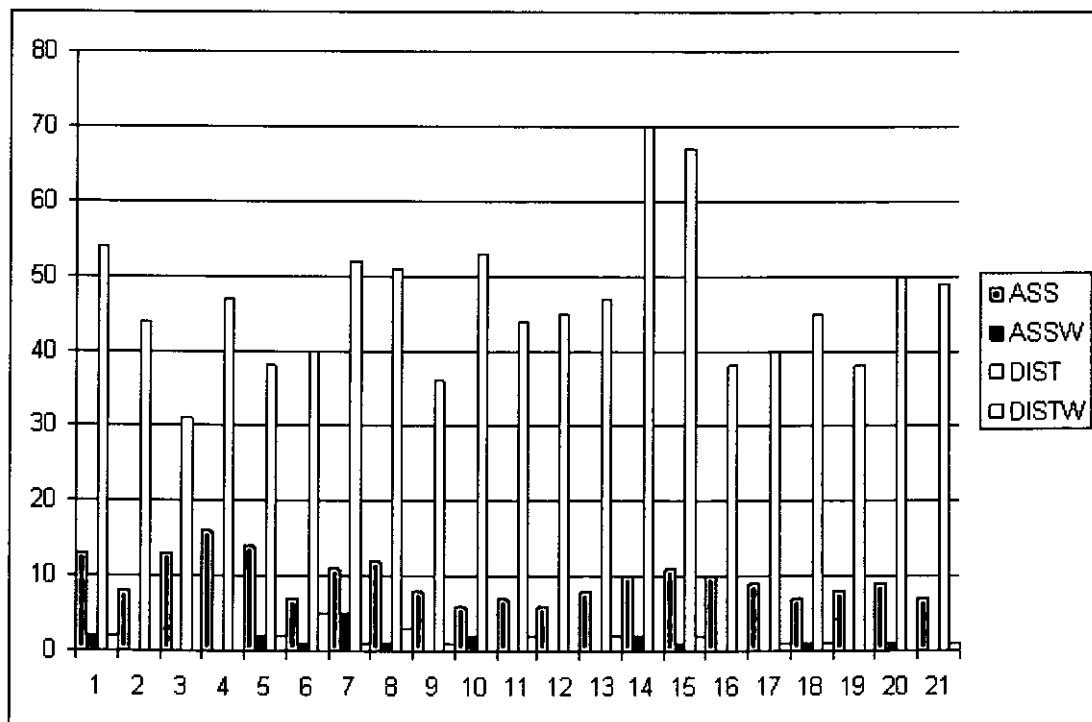
Collision data, 1 – 21 March 2009

March Collision Report Count		
Day	Total	Precip
1	32	Trace
2	23	
3	31	Snow
4	30	Snow
5	47	Snow
6	53	Trace
7	36	
8	14	
9	30	Snow
10	11	
11	10	
12	15	
13	24	Snow
14	16	Snow
15	15	
16	16	Trace
17	19	
18	22	
19	19	
20	23	
21	21	Snow
Grand Total	507	



Calls for Service 1 – 21 March 2009:

Day (March)	Assault	Assault with Weapon	Disturbance	Disturbance with Weapon	Grand Total
1	13	2	54	2	71
2	8		44		52
3	13		31		44
4	16		47		63
5	14	2	38	2	56
6	7	1	40	5	53
7	11	5	52	1	69
8	12	1	51	3	67
9	8		36	1	45
10	6	2	53		61
11	7		44	2	53
12	6		45		51
13	8		47	2	57
14	10	2	70		82
15	11	1	67	2	81
16	10		38		48
17	9		40	1	50
18	7	1	45	1	54
19	8		38		46
20	9	1	50		60
21	7		49	1	57



NOTE: Call For Service Data is raw data and is subject to change.

SAFETY ALERT

Daylight Saving Time: One hour forward...

- At 2 AM Sunday, March 8, Daylight Saving Time will begin across the U.S. and parts of Canada.
- Remind all employees to turn their clocks forward one hour on Saturday evening, March 7th.



ELEVATED RISK

Please note this is an alert regarding a period of elevated risk!

Be Alert...

- During Daylight Saving Time the sun will "set" one hour later in the evening and the sun will rise one hour later in the morning.
- People lose one hour sleep and may be tired from the time change.
- Collisions and injuries increase when people have to adjust to time changes.

Remind everyone to work safely this week, drive cautiously and be on guard for dangerous actions of other motorists.

Increased Risk of Sleeping Children...

- *Children's sleep habits will be affected by the time change.*
 - It is very likely they may fall asleep on the bus during the ride home!
- *Stress to drivers and attendants to be on elevated alert.*
 - Especially this week while the children adjust to their new schedule.

Safety Actions Required for Your Location:

- High-vis vest – Make sure everyone is wearing it – no exceptions!
- Yard lighting – Lighting controlled by a timer, must be set to turn on one hour earlier prior to leaving Friday, March 6th in the PM.
- Snow and ice – If snow and ice are present in the yard, treat them before leaving on Friday, March 6th. Assign someone to inspect the yard early Monday, March 9th prior to employee's arrival and treat the yard again if necessary. Employees may be less alert and hazards may not be visible to employees in the dark.
- Early A.M. pickups – Advise employees to be extra cautious while performing early morning pickups.
- Smoke and CO Detectors – Change the batteries on any smoke and CO detectors at your location and at your home. Safety is a 24/7 activity!
- Radio messages – Increase the sleeping child radio reminders in the AM, MD and PM!!

Your plan provisions will be tested this week. Ensure they are all in place.

Injury Prevention

If you cannot do it safely, don't do it

ENERGY

Does Daylight Saving Time Conserve Energy?

Recent studies shed some light on the efficiency of seasonally changing the clocks

By Charles Q. Choi

Starting this month, roughly one quarter of the world's population will lose sleep and gain sunlight as they set their clocks ahead for daylight saving. People may think that with the time shift, they are conserving electricity otherwise spent on lighting. But recent studies have cast doubt on the energy argument—some research has even found that it ultimately leads to greater power use.

Benjamin Franklin is credited with conceiving the idea of daylight saving in 1784 to conserve candles, but the U.S. did not institute it until World War I as a way to preserve resources for the war effort. The first comprehensive study of its effectiveness occurred during the oil crisis of the 1970s, when the U.S. Department of Transportation found that daylight saving trimmed national electricity usage by roughly 1 percent compared with standard time.

Scant research had been done since, during which time U.S. electricity usage patterns have changed as air conditioning and household electronics have become more pervasive, observes economist Matthew Kotchen of the University of California, Santa Barbara. But lately, changes to daylight saving policies on state and federal levels have presented investigators new chances to explore the before-and-after impacts of the clock shift.

In 2006 Indiana instituted daylight saving statewide for the first time. (Before then, daylight time confusingly was in effect in just a handful of Indiana's counties.) Examining electricity usage and billing since the statewide change, Kotchen and his colleague Laura Grant unexpectedly found that daylight time led to a 1 percent overall rise in residential electricity use, costing the state an extra \$9 million. Although daylight time reduces demand for household lighting, the researchers suggest that it increased demand for cooling on summer evenings and heating in early spring and late fall mornings. They hope to publish their conclusions this year in the *Quarterly Journal of Economics*.

Investigators got another opportunity in 2007, when daylight time nationwide began three weeks earlier, on the second Sunday in March, and ended one week later in the fall. California Energy Commission resource economist Adrienne Kandel and her colleagues discovered that extending daylight time had little to no effect on energy use in the state. The observed drop in energy use of 0.2 percent fell within the statistical margin of error of 1.5 percent.

Not all recent analyses suggest that daylight saving is counterproductive. Instead of studying the impact daylight saving changes had on just one state, senior analyst Jeff Dowd and his colleagues at the U.S. Department of Energy investigated what effect it might have on national energy consumption, looking at 67 electric utilities across the country.

In their October 2008 report to Congress, they conclude that the four-week extension of daylight time saved about 0.5 percent of the nation's electricity per day, or 1.3 trillion watt-hours in total. That amount could power 100,000 households for a year. The study did not just look at residential electricity use but commercial use as well, Dowd says.

The disparities between regional and national results could reflect climate differences between states. "The effect we saw could be even worse in Florida, where air conditioning is used heavily," Kotchen suggests.

If time shifting turns out to be an energy waster, should the sun set on daylight saving? Certainly that would please farmers, who have long opposed it for how it disrupts their schedules. The chances, though, appear nil. "I'm skeptical we could change daylight saving time on a national level, because we've become accustomed to it," Kotchen says, adding that "we might want to consider it for other costs or benefits it could have." Retailers, especially those involved with sports and recreation, have historically argued hardest for extending daylight time. Representatives of the golf industry, for instance, told Congress in 1986 that an extra month of daylight saving was worth up to \$400 million annually in extra sales and fees.

So instead of worrying about cranking up the air conditioner at home, think about what more you can do outdoors when the sun is out. Softball, anyone?

Moving the Hands Is Bad for the Heart

Springing forward may both end and save lives. Researchers at the Karolinska Institute in Stockholm and their colleagues looked at myocardial infarction rates in Sweden since 1987 and found that the number of heart attacks rose about 5 percent during the first week of daylight saving time (called summer time in Europe). In the October 30, 2008, New England Journal of Medicine, they suggest that this rise may result from the disruption of sleep patterns and biological rhythms.

On the other hand, the clock shift could help prevent traffic accidents by enabling more people to drive home in sunlight. By analyzing 28 years of U.S. automobile crash data, RAND Corporation economists and their colleagues suggest that a 1986 change in federal daylight saving time law—which moved the start of daylight time from the last Sunday in April to the first—produced an 8 to 11 percent drop in crashes involving pedestrians and a 6 to 10 percent dip in crashes for vehicular occupants. They reported the findings in a 2007 B.E. Journal of Economic Analysis & Policy study.

Editor's Note: This story was originally printed with the title "Spring Forward or Not?"

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Chugach Retail Substation Load
15 Minute Demand (kW) Data
DST - March 9, 2008 at 2:00 AM
Data for weekends prior to, during, and after DST.

Day of Week	Before DST 2/29/2008-3/03/2008		During DST 3/07/2008-3/10/2008		After DST 3/14/2008-03/17/2008	
	Date and Time	kW	Date and Time	kW	Date and Time	kW
Friday	2/29/2008 0:15	132,323	3/7/2008 0:15	128,550	3/14/2008 0:15	134,417
Friday	2/29/2008 0:30	130,006	3/7/2008 0:30	126,076	3/14/2008 0:30	131,762
Friday	2/29/2008 0:45	128,562	3/7/2008 0:45	124,387	3/14/2008 0:45	129,776
Friday	2/29/2008 1:00	127,064	3/7/2008 1:00	122,913	3/14/2008 1:00	128,001
Friday	2/29/2008 1:15	125,560	3/7/2008 1:15	121,543	3/14/2008 1:15	126,229
Friday	2/29/2008 1:30	124,219	3/7/2008 1:30	120,206	3/14/2008 1:30	125,135
Friday	2/29/2008 1:45	123,243	3/7/2008 1:45	118,609	3/14/2008 1:45	123,613
Friday	2/29/2008 2:00	122,710	3/7/2008 2:00	117,673	3/14/2008 2:00	122,985
Friday	2/29/2008 2:15	122,396	3/7/2008 2:15	117,121	3/14/2008 2:15	122,386
Friday	2/29/2008 2:30	122,326	3/7/2008 2:30	117,014	3/14/2008 2:30	121,788
Friday	2/29/2008 2:45	121,633	3/7/2008 2:45	116,385	3/14/2008 2:45	121,069
Friday	2/29/2008 3:00	121,043	3/7/2008 3:00	115,927	3/14/2008 3:00	120,684
Friday	2/29/2008 3:15	120,925	3/7/2008 3:15	115,467	3/14/2008 3:15	119,965
Friday	2/29/2008 3:30	120,750	3/7/2008 3:30	115,364	3/14/2008 3:30	119,820
Friday	2/29/2008 3:45	120,822	3/7/2008 3:45	115,033	3/14/2008 3:45	119,668
Friday	2/29/2008 4:00	120,393	3/7/2008 4:00	114,809	3/14/2008 4:00	119,683
Friday	2/29/2008 4:15	121,063	3/7/2008 4:15	115,688	3/14/2008 4:15	119,912
Friday	2/29/2008 4:30	122,070	3/7/2008 4:30	116,431	3/14/2008 4:30	120,000
Friday	2/29/2008 4:45	122,866	3/7/2008 4:45	117,403	3/14/2008 4:45	120,632
Friday	2/29/2008 5:00	124,042	3/7/2008 5:00	118,622	3/14/2008 5:00	121,562
Friday	2/29/2008 5:15	126,588	3/7/2008 5:15	120,537	3/14/2008 5:15	123,240
Friday	2/29/2008 5:30	128,871	3/7/2008 5:30	122,040	3/14/2008 5:30	125,254
Friday	2/29/2008 5:45	131,580	3/7/2008 5:45	124,115	3/14/2008 5:45	127,465
Friday	2/29/2008 6:00	134,956	3/7/2008 6:00	127,190	3/14/2008 6:00	129,479
Friday	2/29/2008 6:15	142,573	3/7/2008 6:15	132,721	3/14/2008 6:15	133,582
Friday	2/29/2008 6:30	148,004	3/7/2008 6:30	137,702	3/14/2008 6:30	137,471
Friday	2/29/2008 6:45	153,012	3/7/2008 6:45	141,346	3/14/2008 6:45	141,138
Friday	2/29/2008 7:00	158,020	3/7/2008 7:00	144,772	3/14/2008 7:00	145,774
Friday	2/29/2008 7:15	163,190	3/7/2008 7:15	149,861	3/14/2008 7:15	150,397
Friday	2/29/2008 7:30	166,751	3/7/2008 7:30	153,685	3/14/2008 7:30	153,620
Friday	2/29/2008 7:45	170,460	3/7/2008 7:45	156,656	3/14/2008 7:45	156,103
Friday	2/29/2008 8:00	169,878	3/7/2008 8:00	156,628	3/14/2008 8:00	157,961
Friday	2/29/2008 8:15	168,349	3/7/2008 8:15	157,521	3/14/2008 8:15	158,777
Friday	2/29/2008 8:30	167,580	3/7/2008 8:30	158,335	3/14/2008 8:30	157,064
Friday	2/29/2008 8:45	165,995	3/7/2008 8:45	158,896	3/14/2008 8:45	156,728
Friday	2/29/2008 9:00	164,788	3/7/2008 9:00	158,951	3/14/2008 9:00	156,105
Friday	2/29/2008 9:15	164,499	3/7/2008 9:15	158,635	3/14/2008 9:15	156,935
Friday	2/29/2008 9:30	164,472	3/7/2008 9:30	158,563	3/14/2008 9:30	157,183
Friday	2/29/2008 9:45	164,682	3/7/2008 9:45	159,639	3/14/2008 9:45	156,962
Friday	2/29/2008 10:00	164,276	3/7/2008 10:00	160,159	3/14/2008 10:00	157,283
Friday	2/29/2008 10:15	164,176	3/7/2008 10:15	161,605	3/14/2008 10:15	157,656
Friday	2/29/2008 10:30	164,107	3/7/2008 10:30	161,920	3/14/2008 10:30	157,978
Friday	2/29/2008 10:45	163,750	3/7/2008 10:45	162,771	3/14/2008 10:45	158,187
Friday	2/29/2008 11:00	164,019	3/7/2008 11:00	162,844	3/14/2008 11:00	157,951
Friday	2/29/2008 11:15	163,280	3/7/2008 11:15	163,286	3/14/2008 11:15	157,766
Friday	2/29/2008 11:30	162,616	3/7/2008 11:30	163,456	3/14/2008 11:30	157,674
Friday	2/29/2008 11:45	162,788	3/7/2008 11:45	163,897	3/14/2008 11:45	157,590
Friday	2/29/2008 12:00	162,623	3/7/2008 12:00	163,754	3/14/2008 12:00	157,203
Friday	2/29/2008 12:15	162,539	3/7/2008 12:15	163,758	3/14/2008 12:15	156,877
Friday	2/29/2008 12:30	162,199	3/7/2008 12:30	163,431	3/14/2008 12:30	156,168
Friday	2/29/2008 12:45	161,851	3/7/2008 12:45	162,963	3/14/2008 12:45	155,593
Friday	2/29/2008 13:00	161,551	3/7/2008 13:00	161,603	3/14/2008 13:00	154,997

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Day of Week	Before DST 2/29/2008-3/03/2008		During DST 3/07/2008-3/10/2008		After DST 3/14/2008-03/17/2008	
	Date and Time	kW	Date and Time	kW	Date and Time	kW
Friday	2/29/2008 13:15	161,399	3/7/2008 13:15	161,091	3/14/2008 13:15	154,450
Friday	2/29/2008 13:30	160,624	3/7/2008 13:30	160,699	3/14/2008 13:30	154,278
Friday	2/29/2008 13:45	160,120	3/7/2008 13:45	159,809	3/14/2008 13:45	153,710
Friday	2/29/2008 14:00	160,100	3/7/2008 14:00	159,150	3/14/2008 14:00	154,058
Friday	2/29/2008 14:15	160,014	3/7/2008 14:15	159,653	3/14/2008 14:15	153,171
Friday	2/29/2008 14:30	160,005	3/7/2008 14:30	159,647	3/14/2008 14:30	153,665
Friday	2/29/2008 14:45	160,230	3/7/2008 14:45	160,280	3/14/2008 14:45	153,354
Friday	2/29/2008 15:00	160,331	3/7/2008 15:00	159,907	3/14/2008 15:00	152,979
Friday	2/29/2008 15:15	159,794	3/7/2008 15:15	159,560	3/14/2008 15:15	152,576
Friday	2/29/2008 15:30	158,953	3/7/2008 15:30	159,999	3/14/2008 15:30	152,344
Friday	2/29/2008 15:45	158,770	3/7/2008 15:45	159,909	3/14/2008 15:45	152,200
Friday	2/29/2008 16:00	158,839	3/7/2008 16:00	159,660	3/14/2008 16:00	151,655
Friday	2/29/2008 16:15	159,591	3/7/2008 16:15	159,840	3/14/2008 16:15	150,758
Friday	2/29/2008 16:30	159,598	3/7/2008 16:30	159,674	3/14/2008 16:30	150,845
Friday	2/29/2008 16:45	159,811	3/7/2008 16:45	159,996	3/14/2008 16:45	150,655
Friday	2/29/2008 17:00	159,809	3/7/2008 17:00	160,342	3/14/2008 17:00	149,772
Friday	2/29/2008 17:15	159,325	3/7/2008 17:15	159,499	3/14/2008 17:15	148,712
Friday	2/29/2008 17:30	159,475	3/7/2008 17:30	159,421	3/14/2008 17:30	148,676
Friday	2/29/2008 17:45	161,055	3/7/2008 17:45	160,395	3/14/2008 17:45	148,735
Friday	2/29/2008 18:00	162,137	3/7/2008 18:00	161,233	3/14/2008 18:00	148,962
Friday	2/29/2008 18:15	163,638	3/7/2008 18:15	161,031	3/14/2008 18:15	149,040
Friday	2/29/2008 18:30	166,890	3/7/2008 18:30	162,433	3/14/2008 18:30	149,120
Friday	2/29/2008 18:45	171,686	3/7/2008 18:45	165,310	3/14/2008 18:45	149,931
Friday	2/29/2008 19:00	177,560	3/7/2008 19:00	168,482	3/14/2008 19:00	149,630
Friday	2/29/2008 19:15	178,775	3/7/2008 19:15	171,086	3/14/2008 19:15	149,758
Friday	2/29/2008 19:30	179,286	3/7/2008 19:30	171,545	3/14/2008 19:30	149,933
Friday	2/29/2008 19:45	179,331	3/7/2008 19:45	170,889	3/14/2008 19:45	150,711
Friday	2/29/2008 20:00	178,783	3/7/2008 20:00	170,165	3/14/2008 20:00	153,123
Friday	2/29/2008 20:15	178,080	3/7/2008 20:15	169,142	3/14/2008 20:15	157,001
Friday	2/29/2008 20:30	177,605	3/7/2008 20:30	168,190	3/14/2008 20:30	162,458
Friday	2/29/2008 20:45	176,477	3/7/2008 20:45	167,313	3/14/2008 20:45	165,199
Friday	2/29/2008 21:00	175,370	3/7/2008 21:00	165,842	3/14/2008 21:00	165,286
Friday	2/29/2008 21:15	173,390	3/7/2008 21:15	163,620	3/14/2008 21:15	164,937
Friday	2/29/2008 21:30	171,170	3/7/2008 21:30	161,842	3/14/2008 21:30	164,820
Friday	2/29/2008 21:45	169,398	3/7/2008 21:45	159,824	3/14/2008 21:45	163,225
Friday	2/29/2008 22:00	167,172	3/7/2008 22:00	157,926	3/14/2008 22:00	161,537
Friday	2/29/2008 22:15	164,754	3/7/2008 22:15	155,579	3/14/2008 22:15	159,514
Friday	2/29/2008 22:30	162,332	3/7/2008 22:30	153,684	3/14/2008 22:30	156,965
Friday	2/29/2008 22:45	159,379	3/7/2008 22:45	150,327	3/14/2008 22:45	154,326
Friday	2/29/2008 23:00	156,189	3/7/2008 23:00	146,832	3/14/2008 23:00	151,581
Friday	2/29/2008 23:15	151,454	3/7/2008 23:15	143,764	3/14/2008 23:15	148,141
Friday	2/29/2008 23:30	148,749	3/7/2008 23:30	140,479	3/14/2008 23:30	145,388
Friday	2/29/2008 23:45	146,046	3/7/2008 23:45	137,853	3/14/2008 23:45	142,339
Saturday	3/1/2008 0:00	143,436	3/8/2008 0:00	134,960	3/15/2008 0:00	139,271
Saturday	3/1/2008 0:15	140,403	3/8/2008 0:15	131,745	3/15/2008 0:15	136,464
Saturday	3/1/2008 0:30	138,015	3/8/2008 0:30	129,542	3/15/2008 0:30	134,215
Saturday	3/1/2008 0:45	135,965	3/8/2008 0:45	127,760	3/15/2008 0:45	132,033
Saturday	3/1/2008 1:00	134,214	3/8/2008 1:00	126,154	3/15/2008 1:00	129,958
Saturday	3/1/2008 1:15	131,932	3/8/2008 1:15	123,871	3/15/2008 1:15	128,090
Saturday	3/1/2008 1:30	130,390	3/8/2008 1:30	122,534	3/15/2008 1:30	126,747
Saturday	3/1/2008 1:45	129,073	3/8/2008 1:45	121,269	3/15/2008 1:45	125,372
Saturday	3/1/2008 2:00	128,025	3/8/2008 2:00	120,398	3/15/2008 2:00	124,213

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	Date and Time	kW	Date and Time	kW	Date and Time	kW
Saturday	3/1/2008 2:15	127,368	3/8/2008 2:15	119,440	3/15/2008 2:15	122,989
Saturday	3/1/2008 2:30	126,895	3/8/2008 2:30	118,398	3/15/2008 2:30	122,205
Saturday	3/1/2008 2:45	126,453	3/8/2008 2:45	118,069	3/15/2008 2:45	121,438
Saturday	3/1/2008 3:00	126,208	3/8/2008 3:00	117,622	3/15/2008 3:00	120,765
Saturday	3/1/2008 3:15	125,406	3/8/2008 3:15	117,170	3/15/2008 3:15	120,174
Saturday	3/1/2008 3:30	125,108	3/8/2008 3:30	116,728	3/15/2008 3:30	120,003
Saturday	3/1/2008 3:45	124,628	3/8/2008 3:45	116,240	3/15/2008 3:45	119,443
Saturday	3/1/2008 4:00	124,620	3/8/2008 4:00	115,570	3/15/2008 4:00	119,343
Saturday	3/1/2008 4:15	125,056	3/8/2008 4:15	115,791	3/15/2008 4:15	119,424
Saturday	3/1/2008 4:30	125,204	3/8/2008 4:30	115,718	3/15/2008 4:30	119,395
Saturday	3/1/2008 4:45	125,145	3/8/2008 4:45	116,105	3/15/2008 4:45	119,642
Saturday	3/1/2008 5:00	125,549	3/8/2008 5:00	116,421	3/15/2008 5:00	119,638
Saturday	3/1/2008 5:15	126,687	3/8/2008 5:15	117,376	3/15/2008 5:15	120,373
Saturday	3/1/2008 5:30	127,623	3/8/2008 5:30	117,801	3/15/2008 5:30	121,238
Saturday	3/1/2008 5:45	128,444	3/8/2008 5:45	118,470	3/15/2008 5:45	121,833
Saturday	3/1/2008 6:00	129,351	3/8/2008 6:00	119,466	3/15/2008 6:00	122,771
Saturday	3/1/2008 6:15	132,289	3/8/2008 6:15	122,568	3/15/2008 6:15	124,715
Saturday	3/1/2008 6:30	134,185	3/8/2008 6:30	123,584	3/15/2008 6:30	126,030
Saturday	3/1/2008 6:45	135,342	3/8/2008 6:45	125,009	3/15/2008 6:45	128,010
Saturday	3/1/2008 7:00	137,247	3/8/2008 7:00	127,387	3/15/2008 7:00	129,208
Saturday	3/1/2008 7:15	140,465	3/8/2008 7:15	130,388	3/15/2008 7:15	132,251
Saturday	3/1/2008 7:30	143,399	3/8/2008 7:30	130,479	3/15/2008 7:30	134,464
Saturday	3/1/2008 7:45	146,661	3/8/2008 7:45	129,705	3/15/2008 7:45	136,948
Saturday	3/1/2008 8:00	149,173	3/8/2008 8:00	130,637	3/15/2008 8:00	139,302
Saturday	3/1/2008 8:15	150,509	3/8/2008 8:15	132,576	3/15/2008 8:15	141,218
Saturday	3/1/2008 8:30	151,228	3/8/2008 8:30	134,540	3/15/2008 8:30	141,441
Saturday	3/1/2008 8:45	152,230	3/8/2008 8:45	136,745	3/15/2008 8:45	142,236
Saturday	3/1/2008 9:00	154,123	3/8/2008 9:00	138,812	3/15/2008 9:00	144,609
Saturday	3/1/2008 9:15	155,647	3/8/2008 9:15	141,135	3/15/2008 9:15	146,614
Saturday	3/1/2008 9:30	156,590	3/8/2008 9:30	143,715	3/15/2008 9:30	148,350
Saturday	3/1/2008 9:45	158,671	3/8/2008 9:45	145,773	3/15/2008 9:45	149,449
Saturday	3/1/2008 10:00	159,559	3/8/2008 10:00	147,400	3/15/2008 10:00	151,166
Saturday	3/1/2008 10:15	159,827	3/8/2008 10:15	148,473	3/15/2008 10:15	153,218
Saturday	3/1/2008 10:30	160,062	3/8/2008 10:30	149,267	3/15/2008 10:30	154,209
Saturday	3/1/2008 10:45	160,750	3/8/2008 10:45	149,598	3/15/2008 10:45	154,763
Saturday	3/1/2008 11:00	160,253	3/8/2008 11:00	151,028	3/15/2008 11:00	155,673
Saturday	3/1/2008 11:15	159,924	3/8/2008 11:15	152,042	3/15/2008 11:15	156,607
Saturday	3/1/2008 11:30	159,927	3/8/2008 11:30	152,244	3/15/2008 11:30	156,705
Saturday	3/1/2008 11:45	159,475	3/8/2008 11:45	152,063	3/15/2008 11:45	156,917
Saturday	3/1/2008 12:00	159,472	3/8/2008 12:00	151,871	3/15/2008 12:00	156,731
Saturday	3/1/2008 12:15	159,459	3/8/2008 12:15	151,373	3/15/2008 12:15	156,265
Saturday	3/1/2008 12:30	158,718	3/8/2008 12:30	151,603	3/15/2008 12:30	155,882
Saturday	3/1/2008 12:45	158,074	3/8/2008 12:45	151,868	3/15/2008 12:45	155,086
Saturday	3/1/2008 13:00	158,149	3/8/2008 13:00	151,355	3/15/2008 13:00	154,418
Saturday	3/1/2008 13:15	157,872	3/8/2008 13:15	151,023	3/15/2008 13:15	154,063
Saturday	3/1/2008 13:30	157,169	3/8/2008 13:30	150,739	3/15/2008 13:30	154,151
Saturday	3/1/2008 13:45	156,379	3/8/2008 13:45	150,259	3/15/2008 13:45	153,838
Saturday	3/1/2008 14:00	155,942	3/8/2008 14:00	149,615	3/15/2008 14:00	153,561
Saturday	3/1/2008 14:15	155,733	3/8/2008 14:15	149,886	3/15/2008 14:15	153,281
Saturday	3/1/2008 14:30	155,576	3/8/2008 14:30	150,022	3/15/2008 14:30	152,151
Saturday	3/1/2008 14:45	154,889	3/8/2008 14:45	150,058	3/15/2008 14:45	151,626
Saturday	3/1/2008 15:00	155,379	3/8/2008 15:00	149,900	3/15/2008 15:00	151,210

Chugach Electric Association, Inc.
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15 Minute Demand (kW) Data
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Data for weekends prior to, during, and after DST.

Day of Week	Before DST 2/29/2008-3/03/2008		During DST 3/07/2008-3/10/2008		After DST 3/14/2008-03/17/2008	
	Date and Time	kW	Date and Time	kW	Date and Time	kW
Saturday	3/1/2008 15:15	156,173	3/8/2008 15:15	149,865	3/15/2008 15:15	151,923
Saturday	3/1/2008 15:30	157,110	3/8/2008 15:30	150,101	3/15/2008 15:30	151,671
Saturday	3/1/2008 15:45	158,406	3/8/2008 15:45	151,047	3/15/2008 15:45	151,756
Saturday	3/1/2008 16:00	158,044	3/8/2008 16:00	151,317	3/15/2008 16:00	151,776
Saturday	3/1/2008 16:15	159,542	3/8/2008 16:15	151,889	3/15/2008 16:15	151,352
Saturday	3/1/2008 16:30	160,296	3/8/2008 16:30	153,041	3/15/2008 16:30	151,345
Saturday	3/1/2008 16:45	161,640	3/8/2008 16:45	154,075	3/15/2008 16:45	151,555
Saturday	3/1/2008 17:00	162,179	3/8/2008 17:00	154,482	3/15/2008 17:00	151,299
Saturday	3/1/2008 17:15	162,897	3/8/2008 17:15	155,237	3/15/2008 17:15	151,566
Saturday	3/1/2008 17:30	164,875	3/8/2008 17:30	156,418	3/15/2008 17:30	152,347
Saturday	3/1/2008 17:45	165,611	3/8/2008 17:45	157,403	3/15/2008 17:45	152,251
Saturday	3/1/2008 18:00	167,419	3/8/2008 18:00	157,380	3/15/2008 18:00	151,465
Saturday	3/1/2008 18:15	169,875	3/8/2008 18:15	159,185	3/15/2008 18:15	151,138
Saturday	3/1/2008 18:30	172,297	3/8/2008 18:30	160,992	3/15/2008 18:30	151,245
Saturday	3/1/2008 18:45	177,459	3/8/2008 18:45	163,679	3/15/2008 18:45	150,712
Saturday	3/1/2008 19:00	182,093	3/8/2008 19:00	167,506	3/15/2008 19:00	150,354
Saturday	3/1/2008 19:15	183,466	3/8/2008 19:15	170,582	3/15/2008 19:15	151,182
Saturday	3/1/2008 19:30	183,318	3/8/2008 19:30	170,948	3/15/2008 19:30	152,026
Saturday	3/1/2008 19:45	182,879	3/8/2008 19:45	170,253	3/15/2008 19:45	153,513
Saturday	3/1/2008 20:00	181,893	3/8/2008 20:00	169,273	3/15/2008 20:00	155,821
Saturday	3/1/2008 20:15	180,612	3/8/2008 20:15	168,064	3/15/2008 20:15	158,906
Saturday	3/1/2008 20:30	179,600	3/8/2008 20:30	167,197	3/15/2008 20:30	163,376
Saturday	3/1/2008 20:45	178,129	3/8/2008 20:45	165,895	3/15/2008 20:45	165,934
Saturday	3/1/2008 21:00	176,684	3/8/2008 21:00	164,513	3/15/2008 21:00	165,775
Saturday	3/1/2008 21:15	174,522	3/8/2008 21:15	162,780	3/15/2008 21:15	164,880
Saturday	3/1/2008 21:30	173,290	3/8/2008 21:30	160,651	3/15/2008 21:30	164,427
Saturday	3/1/2008 21:45	171,218	3/8/2008 21:45	158,705	3/15/2008 21:45	162,972
Saturday	3/1/2008 22:00	168,788	3/8/2008 22:00	156,684	3/15/2008 22:00	160,737
Saturday	3/1/2008 22:15	165,810	3/8/2008 22:15	154,151	3/15/2008 22:15	158,407
Saturday	3/1/2008 22:30	163,340	3/8/2008 22:30	151,927	3/15/2008 22:30	156,175
Saturday	3/1/2008 22:45	159,787	3/8/2008 22:45	149,458	3/15/2008 22:45	153,601
Saturday	3/1/2008 23:00	155,977	3/8/2008 23:00	146,096	3/15/2008 23:00	150,008
Saturday	3/1/2008 23:15	152,739	3/8/2008 23:15	141,799	3/15/2008 23:15	146,715
Saturday	3/1/2008 23:30	149,893	3/8/2008 23:30	138,866	3/15/2008 23:30	143,556
Saturday	3/1/2008 23:45	146,938	3/8/2008 23:45	135,658	3/15/2008 23:45	141,190
Sunday	3/2/2008 0:00	144,261	3/9/2008 0:00	133,611	3/16/2008 0:00	138,938
Sunday	3/2/2008 0:15	141,436	3/9/2008 0:15	130,874	3/16/2008 0:15	135,822
Sunday	3/2/2008 0:30	138,987	3/9/2008 0:30	128,515	3/16/2008 0:30	133,014
Sunday	3/2/2008 0:45	136,590	3/9/2008 0:45	126,724	3/16/2008 0:45	131,260
Sunday	3/2/2008 1:00	134,859	3/9/2008 1:00	124,677	3/16/2008 1:00	129,152
Sunday	3/2/2008 1:15	132,462	3/9/2008 1:15	122,903	3/16/2008 1:15	127,338
Sunday	3/2/2008 1:30	131,446	3/9/2008 1:30	121,375	3/16/2008 1:30	125,505
Sunday	3/2/2008 1:45	129,764	3/9/2008 1:45	119,861	3/16/2008 1:45	123,750
Sunday	3/2/2008 2:00	128,743	3/9/2008 2:00	DST	3/16/2008 2:00	122,639
Sunday	3/2/2008 2:15	127,685	3/9/2008 2:15	DST	3/16/2008 2:15	121,715
Sunday	3/2/2008 2:30	127,142	3/9/2008 2:30	DST	3/16/2008 2:30	121,134
Sunday	3/2/2008 2:45	126,585	3/9/2008 2:45	DST	3/16/2008 2:45	120,080
Sunday	3/2/2008 3:00	125,748	3/9/2008 3:00	112,570	3/16/2008 3:00	118,932
Sunday	3/2/2008 3:15	124,491	3/9/2008 3:15	111,695	3/16/2008 3:15	118,480
Sunday	3/2/2008 3:30	123,824	3/9/2008 3:30	111,339	3/16/2008 3:30	118,268
Sunday	3/2/2008 3:45	123,783	3/9/2008 3:45	110,667	3/16/2008 3:45	118,040
Sunday	3/2/2008 4:00	123,965	3/9/2008 4:00	116,120	3/16/2008 4:00	117,461

Chugach Electric Association, Inc.
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Day of Week	Before DST 2/29/2008-3/03/2008		During DST 3/07/2008-3/10/2008		After DST 3/14/2008-03/17/2008	
	Date and Time	kW	Date and Time	kW	Date and Time	kW
Sunday	3/2/2008 4:15	123,827	3/9/2008 4:15	115,992	3/16/2008 4:15	117,123
Sunday	3/2/2008 4:30	123,451	3/9/2008 4:30	115,138	3/16/2008 4:30	117,075
Sunday	3/2/2008 4:45	123,776	3/9/2008 4:45	114,921	3/16/2008 4:45	116,934
Sunday	3/2/2008 5:00	123,736	3/9/2008 5:00	114,597	3/16/2008 5:00	117,239
Sunday	3/2/2008 5:15	124,709	3/9/2008 5:15	115,356	3/16/2008 5:15	117,801
Sunday	3/2/2008 5:30	125,272	3/9/2008 5:30	115,344	3/16/2008 5:30	118,178
Sunday	3/2/2008 5:45	126,192	3/9/2008 5:45	115,265	3/16/2008 5:45	119,079
Sunday	3/2/2008 6:00	127,253	3/9/2008 6:00	115,683	3/16/2008 6:00	118,938
Sunday	3/2/2008 6:15	129,354	3/9/2008 6:15	117,108	3/16/2008 6:15	120,183
Sunday	3/2/2008 6:30	131,014	3/9/2008 6:30	118,172	3/16/2008 6:30	121,345
Sunday	3/2/2008 6:45	132,519	3/9/2008 6:45	119,226	3/16/2008 6:45	122,814
Sunday	3/2/2008 7:00	134,636	3/9/2008 7:00	119,799	3/16/2008 7:00	124,384
Sunday	3/2/2008 7:15	137,122	3/9/2008 7:15	121,611	3/16/2008 7:15	126,727
Sunday	3/2/2008 7:30	138,826	3/9/2008 7:30	124,032	3/16/2008 7:30	129,032
Sunday	3/2/2008 7:45	140,385	3/9/2008 7:45	125,907	3/16/2008 7:45	132,125
Sunday	3/2/2008 8:00	139,814	3/9/2008 8:00	128,005	3/16/2008 8:00	133,785
Sunday	3/2/2008 8:15	141,375	3/9/2008 8:15	130,779	3/16/2008 8:15	133,678
Sunday	3/2/2008 8:30	143,085	3/9/2008 8:30	132,123	3/16/2008 8:30	133,945
Sunday	3/2/2008 8:45	144,788	3/9/2008 8:45	132,854	3/16/2008 8:45	134,449
Sunday	3/2/2008 9:00	146,191	3/9/2008 9:00	132,873	3/16/2008 9:00	135,588
Sunday	3/2/2008 9:15	148,458	3/9/2008 9:15	133,630	3/16/2008 9:15	137,339
Sunday	3/2/2008 9:30	149,839	3/9/2008 9:30	134,552	3/16/2008 9:30	138,602
Sunday	3/2/2008 9:45	151,602	3/9/2008 9:45	135,683	3/16/2008 9:45	139,337
Sunday	3/2/2008 10:00	152,709	3/9/2008 10:00	137,071	3/16/2008 10:00	140,843
Sunday	3/2/2008 10:15	153,907	3/9/2008 10:15	139,017	3/16/2008 10:15	143,889
Sunday	3/2/2008 10:30	154,797	3/9/2008 10:30	140,675	3/16/2008 10:30	144,905
Sunday	3/2/2008 10:45	154,860	3/9/2008 10:45	143,000	3/16/2008 10:45	145,518
Sunday	3/2/2008 11:00	154,553	3/9/2008 11:00	143,928	3/16/2008 11:00	146,218
Sunday	3/2/2008 11:15	155,398	3/9/2008 11:15	144,184	3/16/2008 11:15	146,784
Sunday	3/2/2008 11:30	155,638	3/9/2008 11:30	145,075	3/16/2008 11:30	147,626
Sunday	3/2/2008 11:45	155,760	3/9/2008 11:45	146,334	3/16/2008 11:45	148,684
Sunday	3/2/2008 12:00	155,825	3/9/2008 12:00	147,081	3/16/2008 12:00	148,755
Sunday	3/2/2008 12:15	156,038	3/9/2008 12:15	147,595	3/16/2008 12:15	149,283
Sunday	3/2/2008 12:30	155,737	3/9/2008 12:30	148,480	3/16/2008 12:30	149,786
Sunday	3/2/2008 12:45	154,762	3/9/2008 12:45	148,706	3/16/2008 12:45	149,015
Sunday	3/2/2008 13:00	154,168	3/9/2008 13:00	148,924	3/16/2008 13:00	149,323
Sunday	3/2/2008 13:15	153,772	3/9/2008 13:15	148,518	3/16/2008 13:15	149,089
Sunday	3/2/2008 13:30	153,671	3/9/2008 13:30	148,694	3/16/2008 13:30	148,498
Sunday	3/2/2008 13:45	154,483	3/9/2008 13:45	148,865	3/16/2008 13:45	148,998
Sunday	3/2/2008 14:00	153,807	3/9/2008 14:00	148,490	3/16/2008 14:00	148,696
Sunday	3/2/2008 14:15	153,479	3/9/2008 14:15	147,873	3/16/2008 14:15	148,692
Sunday	3/2/2008 14:30	154,060	3/9/2008 14:30	147,411	3/16/2008 14:30	148,369
Sunday	3/2/2008 14:45	154,423	3/9/2008 14:45	147,194	3/16/2008 14:45	147,608
Sunday	3/2/2008 15:00	154,057	3/9/2008 15:00	146,520	3/16/2008 15:00	147,624
Sunday	3/2/2008 15:15	153,835	3/9/2008 15:15	146,726	3/16/2008 15:15	147,238
Sunday	3/2/2008 15:30	152,925	3/9/2008 15:30	146,364	3/16/2008 15:30	146,903
Sunday	3/2/2008 15:45	152,869	3/9/2008 15:45	146,144	3/16/2008 15:45	146,697
Sunday	3/2/2008 16:00	153,314	3/9/2008 16:00	144,946	3/16/2008 16:00	146,943
Sunday	3/2/2008 16:15	154,760	3/9/2008 16:15	144,696	3/16/2008 16:15	147,266
Sunday	3/2/2008 16:30	155,827	3/9/2008 16:30	145,183	3/16/2008 16:30	146,997
Sunday	3/2/2008 16:45	157,779	3/9/2008 16:45	145,832	3/16/2008 16:45	147,169
Sunday	3/2/2008 17:00	158,908	3/9/2008 17:00	146,565	3/16/2008 17:00	147,495

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	Date and Time	kW	Date and Time	kW	Date and Time	kW
Sunday	3/2/2008 17:15	160,211	3/9/2008 17:15	147,640	3/16/2008 17:15	148,571
Sunday	3/2/2008 17:30	161,441	3/9/2008 17:30	148,255	3/16/2008 17:30	148,833
Sunday	3/2/2008 17:45	163,671	3/9/2008 17:45	149,445	3/16/2008 17:45	149,297
Sunday	3/2/2008 18:00	165,859	3/9/2008 18:00	149,987	3/16/2008 18:00	149,629
Sunday	3/2/2008 18:15	168,455	3/9/2008 18:15	150,297	3/16/2008 18:15	150,200
Sunday	3/2/2008 18:30	170,965	3/9/2008 18:30	150,446	3/16/2008 18:30	150,337
Sunday	3/2/2008 18:45	175,896	3/9/2008 18:45	150,815	3/16/2008 18:45	150,404
Sunday	3/2/2008 19:00	181,199	3/9/2008 19:00	151,429	3/16/2008 19:00	150,546
Sunday	3/2/2008 19:15	184,498	3/9/2008 19:15	153,148	3/16/2008 19:15	151,230
Sunday	3/2/2008 19:30	185,634	3/9/2008 19:30	155,605	3/16/2008 19:30	152,673
Sunday	3/2/2008 19:45	185,387	3/9/2008 19:45	157,726	3/16/2008 19:45	154,702
Sunday	3/2/2008 20:00	184,362	3/9/2008 20:00	161,784	3/16/2008 20:00	156,336
Sunday	3/2/2008 20:15	183,363	3/9/2008 20:15	167,594	3/16/2008 20:15	159,961
Sunday	3/2/2008 20:30	182,502	3/9/2008 20:30	170,241	3/16/2008 20:30	165,966
Sunday	3/2/2008 20:45	180,301	3/9/2008 20:45	169,865	3/16/2008 20:45	170,221
Sunday	3/2/2008 21:00	178,012	3/9/2008 21:00	169,072	3/16/2008 21:00	170,939
Sunday	3/2/2008 21:15	175,741	3/9/2008 21:15	168,181	3/16/2008 21:15	170,252
Sunday	3/2/2008 21:30	172,646	3/9/2008 21:30	166,865	3/16/2008 21:30	169,674
Sunday	3/2/2008 21:45	169,774	3/9/2008 21:45	165,253	3/16/2008 21:45	167,459
Sunday	3/2/2008 22:00	166,616	3/9/2008 22:00	162,835	3/16/2008 22:00	164,782
Sunday	3/2/2008 22:15	162,916	3/9/2008 22:15	160,349	3/16/2008 22:15	161,626
Sunday	3/2/2008 22:30	159,139	3/9/2008 22:30	156,743	3/16/2008 22:30	157,938
Sunday	3/2/2008 22:45	154,345	3/9/2008 22:45	152,053	3/16/2008 22:45	153,148
Sunday	3/2/2008 23:00	150,282	3/9/2008 23:00	149,163	3/16/2008 23:00	148,975
Sunday	3/2/2008 23:15	145,014	3/9/2008 23:15	144,519	3/16/2008 23:15	143,847
Sunday	3/2/2008 23:30	141,053	3/9/2008 23:30	140,321	3/16/2008 23:30	139,470
Sunday	3/2/2008 23:45	137,822	3/9/2008 23:45	136,933	3/16/2008 23:45	136,413
Monday	3/3/2008 0:00	135,093	3/10/2008 0:00	134,565	3/17/2008 0:00	133,520
Monday	3/3/2008 0:15	132,464	3/10/2008 0:15	131,243	3/17/2008 0:15	130,576
Monday	3/3/2008 0:30	129,299	3/10/2008 0:30	128,396	3/17/2008 0:30	127,532
Monday	3/3/2008 0:45	127,239	3/10/2008 0:45	126,333	3/17/2008 0:45	125,965
Monday	3/3/2008 1:00	126,007	3/10/2008 1:00	124,290	3/17/2008 1:00	124,102
Monday	3/3/2008 1:15	124,745	3/10/2008 1:15	122,792	3/17/2008 1:15	122,320
Monday	3/3/2008 1:30	123,593	3/10/2008 1:30	121,331	3/17/2008 1:30	121,177
Monday	3/3/2008 1:45	122,461	3/10/2008 1:45	119,773	3/17/2008 1:45	120,296
Monday	3/3/2008 2:00	121,548	3/10/2008 2:00	118,667	3/17/2008 2:00	119,590
Monday	3/3/2008 2:15	121,127	3/10/2008 2:15	117,871	3/17/2008 2:15	118,682
Monday	3/3/2008 2:30	121,077	3/10/2008 2:30	117,101	3/17/2008 2:30	117,450
Monday	3/3/2008 2:45	120,399	3/10/2008 2:45	116,303	3/17/2008 2:45	116,786
Monday	3/3/2008 3:00	120,164	3/10/2008 3:00	115,389	3/17/2008 3:00	116,121
Monday	3/3/2008 3:15	120,205	3/10/2008 3:15	114,761	3/17/2008 3:15	115,799
Monday	3/3/2008 3:30	119,995	3/10/2008 3:30	114,348	3/17/2008 3:30	116,171
Monday	3/3/2008 3:45	120,323	3/10/2008 3:45	114,428	3/17/2008 3:45	116,126
Monday	3/3/2008 4:00	120,322	3/10/2008 4:00	114,279	3/17/2008 4:00	116,017
Monday	3/3/2008 4:15	121,225	3/10/2008 4:15	114,457	3/17/2008 4:15	116,990
Monday	3/3/2008 4:30	122,200	3/10/2008 4:30	114,644	3/17/2008 4:30	117,655
Monday	3/3/2008 4:45	123,213	3/10/2008 4:45	115,345	3/17/2008 4:45	118,239
Monday	3/3/2008 5:00	124,273	3/10/2008 5:00	116,219	3/17/2008 5:00	119,053
Monday	3/3/2008 5:15	126,970	3/10/2008 5:15	117,935	3/17/2008 5:15	122,122
Monday	3/3/2008 5:30	130,024	3/10/2008 5:30	119,720	3/17/2008 5:30	124,980
Monday	3/3/2008 5:45	133,297	3/10/2008 5:45	121,073	3/17/2008 5:45	127,876
Monday	3/3/2008 6:00	136,305	3/10/2008 6:00	123,914	3/17/2008 6:00	131,297

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Data for weekends prior to, during, and after DST.

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	Date and Time	kW	Date and Time	kW	Date and Time	kW
Monday	3/3/2008 6:15	142,982	3/10/2008 6:15	128,402	3/17/2008 6:15	137,320
Monday	3/3/2008 6:30	149,592	3/10/2008 6:30	132,816	3/17/2008 6:30	143,595
Monday	3/3/2008 6:45	153,968	3/10/2008 6:45	136,672	3/17/2008 6:45	148,435
Monday	3/3/2008 7:00	158,519	3/10/2008 7:00	139,979	3/17/2008 7:00	154,054
Monday	3/3/2008 7:15	163,598	3/10/2008 7:15	144,388	3/17/2008 7:15	159,283
Monday	3/3/2008 7:30	166,620	3/10/2008 7:30	148,544	3/17/2008 7:30	163,570
Monday	3/3/2008 7:45	166,814	3/10/2008 7:45	150,807	3/17/2008 7:45	167,212
Monday	3/3/2008 8:00	164,465	3/10/2008 8:00	152,109	3/17/2008 8:00	166,690
Monday	3/3/2008 8:15	164,071	3/10/2008 8:15	154,873	3/17/2008 8:15	165,288
Monday	3/3/2008 8:30	163,029	3/10/2008 8:30	155,893	3/17/2008 8:30	163,790
Monday	3/3/2008 8:45	161,096	3/10/2008 8:45	154,395	3/17/2008 8:45	161,446
Monday	3/3/2008 9:00	159,882	3/10/2008 9:00	153,059	3/17/2008 9:00	159,305
Monday	3/3/2008 9:15	159,208	3/10/2008 9:15	152,441	3/17/2008 9:15	158,425
Monday	3/3/2008 9:30	159,382	3/10/2008 9:30	151,808	3/17/2008 9:30	158,906
Monday	3/3/2008 9:45	159,851	3/10/2008 9:45	152,041	3/17/2008 9:45	157,840
Monday	3/3/2008 10:00	159,817	3/10/2008 10:00	151,008	3/17/2008 10:00	157,982
Monday	3/3/2008 10:15	160,421	3/10/2008 10:15	152,018	3/17/2008 10:15	158,380
Monday	3/3/2008 10:30	160,702	3/10/2008 10:30	152,202	3/17/2008 10:30	158,510
Monday	3/3/2008 10:45	161,065	3/10/2008 10:45	152,499	3/17/2008 10:45	158,063
Monday	3/3/2008 11:00	161,656	3/10/2008 11:00	152,582	3/17/2008 11:00	158,081
Monday	3/3/2008 11:15	161,442	3/10/2008 11:15	152,629	3/17/2008 11:15	157,388
Monday	3/3/2008 11:30	161,930	3/10/2008 11:30	152,457	3/17/2008 11:30	157,359
Monday	3/3/2008 11:45	162,337	3/10/2008 11:45	152,832	3/17/2008 11:45	157,117
Monday	3/3/2008 12:00	161,881	3/10/2008 12:00	152,647	3/17/2008 12:00	156,462
Monday	3/3/2008 12:15	162,049	3/10/2008 12:15	152,511	3/17/2008 12:15	156,358
Monday	3/3/2008 12:30	161,892	3/10/2008 12:30	152,425	3/17/2008 12:30	155,994
Monday	3/3/2008 12:45	162,129	3/10/2008 12:45	152,755	3/17/2008 12:45	155,468
Monday	3/3/2008 13:00	161,464	3/10/2008 13:00	152,063	3/17/2008 13:00	154,873
Monday	3/3/2008 13:15	161,306	3/10/2008 13:15	151,493	3/17/2008 13:15	154,737
Monday	3/3/2008 13:30	161,120	3/10/2008 13:30	151,317	3/17/2008 13:30	154,806
Monday	3/3/2008 13:45	161,293	3/10/2008 13:45	151,579	3/17/2008 13:45	154,653
Monday	3/3/2008 14:00	160,926	3/10/2008 14:00	151,039	3/17/2008 14:00	153,926
Monday	3/3/2008 14:15	160,960	3/10/2008 14:15	150,384	3/17/2008 14:15	153,648
Monday	3/3/2008 14:30	161,823	3/10/2008 14:30	150,623	3/17/2008 14:30	153,746
Monday	3/3/2008 14:45	163,258	3/10/2008 14:45	150,338	3/17/2008 14:45	153,751
Monday	3/3/2008 15:00	163,516	3/10/2008 15:00	149,950	3/17/2008 15:00	154,171
Monday	3/3/2008 15:15	163,775	3/10/2008 15:15	149,420	3/17/2008 15:15	154,303
Monday	3/3/2008 15:30	163,797	3/10/2008 15:30	149,713	3/17/2008 15:30	153,845
Monday	3/3/2008 15:45	163,682	3/10/2008 15:45	149,678	3/17/2008 15:45	153,395
Monday	3/3/2008 16:00	164,003	3/10/2008 16:00	149,636	3/17/2008 16:00	153,710
Monday	3/3/2008 16:15	164,198	3/10/2008 16:15	148,753	3/17/2008 16:15	153,775
Monday	3/3/2008 16:30	164,501	3/10/2008 16:30	148,642	3/17/2008 16:30	152,406
Monday	3/3/2008 16:45	164,981	3/10/2008 16:45	149,199	3/17/2008 16:45	152,060
Monday	3/3/2008 17:00	165,721	3/10/2008 17:00	148,612	3/17/2008 17:00	152,132
Monday	3/3/2008 17:15	166,105	3/10/2008 17:15	147,497	3/17/2008 17:15	151,912
Monday	3/3/2008 17:30	167,102	3/10/2008 17:30	147,900	3/17/2008 17:30	152,134
Monday	3/3/2008 17:45	169,164	3/10/2008 17:45	148,746	3/17/2008 17:45	152,405
Monday	3/3/2008 18:00	172,052	3/10/2008 18:00	148,425	3/17/2008 18:00	152,742
Monday	3/3/2008 18:15	173,638	3/10/2008 18:15	148,398	3/17/2008 18:15	151,973
Monday	3/3/2008 18:30	175,365	3/10/2008 18:30	148,474	3/17/2008 18:30	151,239
Monday	3/3/2008 18:45	178,676	3/10/2008 18:45	148,724	3/17/2008 18:45	150,604
Monday	3/3/2008 19:00	184,039	3/10/2008 19:00	149,330	3/17/2008 19:00	150,598

Chugach Electric Association, Inc.
Chugach Retail Substation Load
15 Minute Demand (kW) Data
DST - March 9, 2008 at 2:00 AM
Data for weekends prior to, during, and after DST.

Day of Week	Before DST 2/29/2008-3/03/2008		During DST 3/07/2008-3/10/2008		After DST 3/14/2008-03/17/2008	
	Date and Time	kW	Date and Time	kW	Date and Time	kW
Monday	3/3/2008 19:15	186,274	3/10/2008 19:15	150,132	3/17/2008 19:15	151,254
Monday	3/3/2008 19:30	186,082	3/10/2008 19:30	151,622	3/17/2008 19:30	151,544
Monday	3/3/2008 19:45	185,859	3/10/2008 19:45	153,285	3/17/2008 19:45	151,982
Monday	3/3/2008 20:00	184,700	3/10/2008 20:00	156,209	3/17/2008 20:00	153,923
Monday	3/3/2008 20:15	183,856	3/10/2008 20:15	161,420	3/17/2008 20:15	156,954
Monday	3/3/2008 20:30	182,339	3/10/2008 20:30	166,286	3/17/2008 20:30	161,705
Monday	3/3/2008 20:45	180,418	3/10/2008 20:45	168,153	3/17/2008 20:45	167,627
Monday	3/3/2008 21:00	178,765	3/10/2008 21:00	167,821	3/17/2008 21:00	169,431
Monday	3/3/2008 21:15	176,081	3/10/2008 21:15	166,622	3/17/2008 21:15	168,452
Monday	3/3/2008 21:30	172,566	3/10/2008 21:30	165,745	3/17/2008 21:30	167,134
Monday	3/3/2008 21:45	169,300	3/10/2008 21:45	164,370	3/17/2008 21:45	164,974
Monday	3/3/2008 22:00	165,639	3/10/2008 22:00	161,404	3/17/2008 22:00	161,938
Monday	3/3/2008 22:15	161,404	3/10/2008 22:15	158,384	3/17/2008 22:15	158,647
Monday	3/3/2008 22:30	157,101	3/10/2008 22:30	155,227	3/17/2008 22:30	155,301
Monday	3/3/2008 22:45	151,388	3/10/2008 22:45	150,278	3/17/2008 22:45	150,766
Monday	3/3/2008 23:00	147,456	3/10/2008 23:00	146,443	3/17/2008 23:00	146,844
Monday	3/3/2008 23:15	143,161	3/10/2008 23:15	142,959	3/17/2008 23:15	142,772
Monday	3/3/2008 23:30	139,632	3/10/2008 23:30	139,442	3/17/2008 23:30	138,821
Monday	3/3/2008 23:45	136,663	3/10/2008 23:45	136,212	3/17/2008 23:45	135,085
Monday	3/4/2008 0:00	133,652	3/11/2008 0:00	132,449	3/18/2008 0:00	132,659
Total Energy (kWh) for Period ¹		14,633,216		13,630,115		13,849,703
Estimated Class Contributions						
Residential		7,613,241		7,091,357		7,205,602
Small Commercial		1,417,926		1,320,727		1,342,005
Large Commercial		5,529,001		5,149,990		5,232,959
Street Lighting		73,048		68,041		69,137
Total Energy (kWh)		14,633,216		13,630,115		13,849,703

Source: Chugach Electronic Meter Readings and SCADA energy accounting.

¹ Conversion from kW to kWh requires dividing kW by 4

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OP-ED CONTRIBUTOR

What's the Point of Daylight Time?

By MATTHEW J. KOTCHEN and LAURA E. GRANT

Santa Barbara, Calif.

WHY do we — along with 75 other countries — alternate between standard time and daylight time? Although many people believe it has an agricultural provenance, daylight time has always been a policy meant to save energy. As Benjamin Franklin argued, if people moved up their summer schedules by an hour, they could live by “sunshine rather than candles” in the evenings.

Energy conservation was the motivation for daylight time during World Wars I and II and the oil embargo of the 1970s, and it remains so today — even though there has been little scientific evidence to suggest daylight time actually helps us cut back on electricity use.

Recently, however, we were able to conduct a study in Indiana, where daylight time was instituted statewide only in 2006. Before that year, daylight time was in effect in just a handful of counties. This change of policy offered a unique, natural experiment to measure the overall effect on residential electricity consumption. We could compare the amount of energy used by households in the late-adopting counties during the two years before they switched to daylight time with the amounts they used during the year afterward — while using counties that always practiced daylight time as a control group.

We found that daylight time caused a 1 percent overall increase in residential electricity use, though the effect varied from month to month. The greatest increase occurred in late summer and early fall, when electricity use rose by 2 percent to 4 percent.

Daylight time costs Indiana households an average of \$3.29 a year in higher electricity bills, or about \$9 million for the whole state. We also calculated the health and other social costs of increased pollution emissions at \$1.7 million to \$5.5 million per year.

What explains this unexpected result? While daylight time reduces demand for household lighting, it increases demand for heating in the early spring and late fall (in the mornings) and, even more important, for cooling on summer evenings. Benjamin Franklin was right about candles, in other words, but he did not consider air-conditioners.

In regions of the United States where demand for air-conditioning is greater than in Indiana, this spike in cooling costs is likely to be even greater. Arizona, one of the hottest states, may have it right; it does not practice daylight time.

Eliminating daylight time would thus accord with President-elect Barack Obama's stated goals of conserving

NBER WORKING PAPER SERIES

DOES DAYLIGHT SAVING TIME SAVE ENERGY? EVIDENCE FROM A NATURAL
EXPERIMENT IN INDIANA

Matthew J. Kotchen
Laura E. Grant

Working Paper 14429
<http://www.nber.org/papers/w14429>

NATIONAL BUREAU OF ECONOMIC RESEARCH
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October 2008

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Does Daylight Saving Time Save Energy? Evidence from a Natural Experiment in Indiana
Matthew J. Kotchen and Laura E. Grant
NBER Working Paper No. 14429
October 2008
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ABSTRACT

The history of Daylight Saving Time (DST) has been long and controversial. Throughout its implementation during World Wars I and II, the oil embargo of the 1970s, consistent practice today, and recent extensions, the primary rationale for DST has always been to promote energy conservation. Nevertheless, there is surprisingly little evidence that DST actually saves energy. This paper takes advantage of a natural experiment in the state of Indiana to provide the first empirical estimates of DST effects on electricity consumption in the United States since the mid-1970s. Focusing on residential electricity demand, we conduct the first-ever study that uses micro-data on households to estimate an overall DST effect. The dataset consists of more than 7 million observations on monthly billing data for the vast majority of households in southern Indiana for three years. Our main finding is that—contrary to the policy's intent—DST increases residential electricity demand. Estimates of the overall increase are approximately 1 percent, but we find that the effect is not constant throughout the DST period. DST causes the greatest increase in electricity consumption in the fall, when estimates range between 2 and 4 percent. These findings are consistent with simulation results that point to a tradeoff between reducing demand for lighting and increasing demand for heating and cooling. We estimate a cost of increased electricity bills to Indiana households of \$9 million per year. We also estimate social costs of increased pollution emissions that range from \$1.7 to \$5.5 million per year. Finally, we argue that the effect is likely to be even stronger in other regions of the United States.

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1. Introduction

Daylight Saving Time (DST) is currently practiced in 76 countries and directly affects more than 1.6 billion people worldwide. The well-known mnemonic of “spring-forward, fall-back” describes the annual ritual: turn clocks forward one hour in the spring, and turn them back one hour in the fall. Less well known is that DST is a policy designed to conserve energy.¹ Benjamin Franklin (1784) is credited with the basic idea after observing that people were sleeping during sunlit hours in the early morning and burning candles for illumination in the evening. He argued that if people adjusted their schedules to earlier in the day during summer months, when day length is longest, an immense sum of tallow and wax could be saved by the “economy of using sunshine rather than candles.” To encourage the behavior, Franklin satirically proposed the firing of cannons to awaken people at dawn and a tax on window shutters that keep out sunlight.²

More than a century later, William Willet (1907) proposed the simple advancement of clock time during summer months in order to avoid “The Waste of Daylight.” But it was not until World War I that the idea finally took hold. Germany was the first country to implement a DST policy, with the aim of reducing demand for electrical lighting so that more coal could be diverted to the war effort. Thirty-one other nations, including the United States, soon followed with their own DST policies, but the practice was generally repealed after the war ended. Decades later, and for the same reason, 52 countries again implemented various DST policies during World War II. In the United States, year-round DST was practiced for three years and then repealed entirely.

¹ A common misperception is that DST is an agricultural policy. Farmers have historically been one of the most organized groups against the practice of DST, as it requires them to work in morning darkness for an extra hour in order to coordinate with the timing of markets. See Prerau (2005) for a detailed discussion of DST’s long and controversial history.

² Interestingly, Franklin also recognized that his calculations of the economic savings during the summer were an underestimate because of general equilibrium effects. He wrote that “... I have calculated upon only one half of the year, and much may be saved in the other, though the days are shorter. Besides, the immense stock of wax and tallow left unconsumed during the summer, will probably make candles much cheaper for the ensuing winter, and continue them cheaper as long as the proposed reformation shall be supported.”

The Uniform Time Act of 1966 was the first federal DST law in the United States that was not part of a wartime initiative. The Act established that DST would begin on the last Sunday in April and end on the last Sunday in October.³ Then, the oil embargo of the early 1970s prompted temporary changes to federal DST policy, when the Emergency Daylight Saving Time Energy Conservation Act of 1973 imposed year-round DST for 15 months. A more enduring change, again with the intent of energy conservation, occurred in 1986, when the start date was moved forward by three weeks. The DST regime in practice today includes a further extension authorized within the Energy Policy Act of 2005. Having begun in 2007, DST now starts three weeks earlier, on the second Sunday in March, and lasts one week longer, until the first Sunday in November. Figure 1 shows the sunrise and sunset times, the time shifting of DST, the 2007 extensions on both ends, and the day length throughout the year (the middle line) for a representative location in southern Indiana.

Congressional debate about the most recent extension to DST focused on the potential energy savings. It was forecasted that each additional day of DST would save the equivalent of 100,000 barrels of oil per day (Congressional Record 2005a, 2005b). But the 2005 Energy Policy Act specifically requires that research be conducted to estimate the actual effects on energy demand, and Congress retains the right to repeal the extensions if the conservation benefits are not realized. Despite the conservation rationale for DST's current and historical practice, surprisingly little research has been conducted to determine whether DST actually saves energy.⁴ Even among the few studies that do exist, which we review in the next section, the evidence is inconclusive. Hence, the need to better understand the DST effect on energy consumption is immediately policy relevant. What is more, with worldwide energy demand expanding rapidly, along with concerns about climate change, it is increasingly important to know whether DST,

³ Individual states could opt for exemption, but only Arizona, Hawaii, Indiana, and a few U.S. territories have done so in various ways over the years.

⁴ Other effects of DST have been studied in more detail. These include studies that investigate the effects on safety (e.g., Coate and Markowitz 2004; Sullivan and Flannagan 2002; Coren 1996a, 1996b), health (e.g., Kantermann et al 2007), economic coordination (Hamermesh et al 2006), and stock market performance (Kamstra et al 2000, 2002; Pinegar 2002).

which is among the most uniformly applied policies on the planet, has its intended effect of energy conservation.

In this paper, we investigate whether DST does in fact save energy, with a focus on residential electricity consumption. Our research design takes advantage of the unique history of DST in the state of Indiana, combined with a data set of monthly billing cycles for the majority of households in the southern portion of the state for the years 2004 through 2006. While some counties in Indiana have historically practiced DST, the majority have not. This changed with a state law that required all counties to begin practicing DST in 2006. The initial heterogeneity of DST among Indiana counties and the policy change in 2006 provides a natural experiment—with treatment and control sets of counties—to empirically identify the relationship between DST and residential electricity demand.

Our results provide the first empirical estimates of DST effects on electricity demand in the United States since the mid-1970s. The study is also the first ever to use residential micro-data. A unique feature of the research design, due to the natural experiment, is that we are able to estimate, for the first time, an overall DST effect and different effects throughout the year over the entire DST period, including the periods of transition. We also run an engineering model that simulates the effect of DST on household electricity demand. These results are comparable with our empirical estimates and highlight seasonal differences in the quantity and timing of electricity demand for lighting, heating, and cooling. A further contribution of the paper is that we estimate changes in pollution emissions due to DST and quantify the associated social costs and/or benefits.

We find that the overall DST effect on electricity consumption runs counter to conventional wisdom: DST results in a 1-percent overall increase in residential electricity demand, and the effect is highly statistically significant. We also find that the effect is not constant throughout the DST period. In particular, DST causes the greatest increase in consumption later in the year, with October estimates ranging from an increase of 2 to nearly 4 percent. To help interpret these results, we simulate the effect of DST for an Indiana household with a U.S. Depart-

ment of Energy model for residential electricity demand (eQuest). Consistent with Benjamin Franklin's original conjecture, DST is found to save on electricity used for illumination, but there are increases in electricity used for heating and cooling. Both the empirical and simulation results suggest that the latter effect is larger than the former. A final component of our analysis is the calculation of costs associated with DST. We find that the policy costs Indiana households an average of \$3.29 per year in increased electricity bills, which aggregates to approximately \$9 million over the entire state. We also calculate the social costs in terms of increased pollution emissions, and these estimates range from \$1.7 to \$5.5 million per year.

The remainder of the paper proceeds as follows: The next section reviews existing evidence on the effect of DST on electricity consumption. Section 3 describes the research design and data collection. Section 4 contains the empirical analysis. Section 5 provides a discussion of the results with comparisons to engineering simulations and cost estimates. Section 6 concludes with a brief summary and remarks about the generalizability of our results.

2. Existing Evidence

The most widely cited study of the DST effect on electricity demand is the U.S. Department of Transportation (1975) report that was required by the Emergency Daylight Saving Time Energy Conservation Act of 1973. The most compelling part of the study is its use of the 'equivalent day normalization technique,' which is essentially a difference-in-differences approach. Using hourly electricity load data from 22 different utilities for a period of days before and after transitions in and out of DST, days are partitioned into DST-influenced periods (morning, evening) and uninfluenced periods (midday, night). It is then assumed that differences in the difference between influenced and uninfluenced periods, before and after the transition are due to the DST effect. The results indicate an average load reduction of approximately 1 percent during the spring and fall transition periods, but a subsequent evaluation of the study, conducted by the National Bureau of Standards (Filliben 1976), concludes that the energy savings are questionable and statistically insignificant.

The California Energy Commission (CEC 2001) conducts a simulation-based study to estimate the effects of DST on statewide electricity consumption. A system of equations is estimated to explain hourly electricity demand as a function of employment, weather, temperature, and sunlight. The Commission then simulates electricity use under different DST regimes. The results indicate that practicing winter DST reduces consumption by 0.5 percent, and DST as currently practiced leaves electricity consumption virtually unchanged between May and September, but may reduce consumption between 0.15 and 0.3 percent during April and October.⁵ More recently, the CEC modeling approach is used to consider the actual extensions to DST that occurred in 2007 (CEC 2007). Based on the spring and fall extensions, the simulation predicts a decrease in electricity consumption of 0.56 percent, but the 95-percent confidence interval includes zero and ranges from a decrease of 2.2 percent to an increase of 1.1 percent.

The U.S. Department of Energy (DOE 2006) also conducts a study to estimate the potential energy saving impacts of the 2007 DST extensions. Using hourly electricity data immediately before and after the DST transitions in 2004, the study estimates DST effects and extrapolates them into the extension periods to predict what might happen beginning in 2007. The results of most relevance here are the actual DST effects. The main findings of the study include the following: a decrease in electricity demand of 0.4 percent at the points of transition, but the estimate is very imprecise; morning increases in demand that are more than offset by evening decreases; southern regions of the United States experience lower energy savings; and energy savings are slightly greater during the spring transition compared to the fall transition.⁶

Kellogg and Wolff (in press) take advantage of a quasi-experiment that occurred in Australia with the extension of DST in conjunction with the Sydney Olympic Games in 2000. Using a comparison of electricity load data from two different states, where only one experi-

⁵ The Indiana Fiscal Policy Institute (2001) attempts to replicate the CEC approach and estimate the potential effects of DST in Indiana; however, the results are not conclusive. While the statistical models are reported as very preliminary and appear to have never been completed, the results indicate that DST in Indiana could either increase or decrease electricity consumption.

⁶ Currently underway, but not yet released, is the official U.S. DOE report to Congress required by the Energy Policy Act of 2005. The report will use 2007 data to estimate the actual, rather than potential, energy savings due to extended DST.

enced the extension of DST, they find that DST increases demand for electricity in the morning and decreases demand in the evening. While in some cases the net effect is an increase in demand, the combined results are not statistically different from zero. Kellogg and Wolff also apply the CEC simulation technique to determine whether it reasonably predicts what actually occurred with the Australian DST extension. They find that the simulation fails to predict the morning increase in consumption and overestimates the evening decrease. Their study provides the first empirical results that question whether DST policies actually produce the intended effect of reducing electricity demand.

Using an engineering simulation model, Rock (1997) also finds evidence that DST might increase, rather than decrease, electricity consumption. He calibrates a model of energy consumption for a typical residence using utility records and chosen parameters for construction type, residential appliances, heating and cooling systems, lighting requirements, and number of occupants. In order to account for differences in weather and geographic location, the model simulates DST scenarios for 224 different locations within the United States. The results indicate that DST, as it is currently practiced, increases electricity consumption by 0.244 percent when averaged over the different locations. Results for alternative scenarios indicate that extending DST year-round would save an average of 0.267 percent, but the overall effect of year-round DST compared to no DST would leave electricity consumption virtually unchanged.

A similar methodology is employed in two recent studies that take place in Japan, where DST is continually debated but not currently practiced. Fong *et al.* (2007) use a simulation model to investigate the effects of DST on household lighting, and they find a reduction in electricity consumption that differs by region.⁷ Shimoda *et al.* (2007) conduct a similar exercise, with the added consideration of DST's effect on residential cooling. When considering both effects, they find that implementing DST results in a 0.13-percent increase in residential electricity consumption. The underlying mechanism for the result is that residential cooling is

⁷ Aries and Newsham (2008) review other studies, many of which are technical reports not published in peer-reviewed journals, that focus on lighting energy use in the United States and other countries. They find no clear DST effect other than some evidence for a reduction in evening peak demand for electricity.

greater in the evening than in the morning, and implementing DST aligns an additional hour of higher outdoor air temperature and solar radiation with the primary cooling times of the evening.

This review of existing studies suggests that the evidence to date is inconclusive about the effect of DST on electricity consumption. None of the empirical studies finds an overall effect that is statistically different from zero, and the simulation-based studies find mixed results. Hence, given the widespread practice of DST, its conservation rationale, and the recent changes to policy, there is a clear need for further research that informs the question of whether DST actually saves energy.

3. Research Design and Data Collection

Our study takes advantage of the unique history of DST in the state of Indiana. The practice of DST has been the subject of long-standing controversy in the state, due in large part to the importance of agriculture in Indiana, and the state's location split between the Eastern and Central Time Zones. For more than 30 years prior to 2006, the resultant policy has been three different time scenarios within the state: 77 counties on Eastern Standard Time (EST) that did not practice DST; 10 counties clustered in the north- and south-western corners of the state on Central Standard Time (CST) that did practice DST; and 5 counties in the south-eastern portion of the state on EST that did practice DST.⁸ The different time scenarios changed in 2006 when the entire state began practicing DST as required by a law that passed the state legislature in 2005. Also beginning in 2006, a handful of counties switched from EST to CST.

Let us now be more precise about time and timing in the southern portion of Indiana, where our study takes place. The shaded counties in Figure 2 are those included in the study. It is useful to partition the counties into four sets, as shown in the figure. The SE and SW counties experienced no change; they practiced DST prior to 2006 and have remained on EST and CST,

⁸ These differences in the practice of DST were possible because of a 1972 amendment to the Uniform Time Act of 1966 (15 U.S.C. 260-67). The amendment was a direct response to Indiana's ongoing time regime debate, and it permitted states with multiple time zones to allow exemptions from the practice of DST.

respectively. The NE counties began practicing DST for the first time in 2006, but remained on EST. The NW counties also began practicing DST for the first time in 2006, but changed time zones from EST to CST simultaneously at the spring transition into DST. In effect, the NW counties did not advance clocks one hour in April 2006, but did turn them back one hour at the end of October 2006.⁹

The pattern of time and timing in southern Indiana creates a natural experiment to identify the effect of DST on residential electricity demand. The empirical strategy relies on having monthly billing data for households located within the different sets of counties before and after the policy change in 2006. Considering only the DST periods of each year, we can partition electricity demand into pre-2006 and 2006 periods. Among the different counties, we thus have treatment and control groups when moving from the before to after period. The NE counties serve as a treatment group because they began practicing DST for the first time in 2006. The other sets of counties serve as a control group because their clock time never changed during the DST period of the year, before and after the policy change.¹⁰ The key identification assumption is that, after controlling for changes in observables, such as weather and the practice of DST, changes from year to year in electricity demand would otherwise be the same for the treatment and control groups of counties. With this assumption, identification of the DST effect comes from a difference-in-differences estimate between the two groups, before and after the policy change.

Table 1 shows selected variables from the 2000 U.S. Census for the different sets of counties and in total. The majority of people live in the eastern counties. The northern counties have a larger fraction of the population classified as rural and farm, although the overall pro-

⁹ Specific counties included in the study are the following: (NE) Bartholomew, Brown, Crawford, Decatur, Franklin, Jackson, Jefferson, Jennings, Lawrence, Monroe, Orange, Scott, Ripley, Washington; (SE) Clark, Dearborn, Floyd, Harrison; (SW) Gibson, Posey, Warrick; (NW) Daviess, Knox, Martin, Pike. Counties in southern Indiana not included in the study because data were not available from Duke Energy are the following: (SE) Ohio, Switzerland; (SW) Spencer, Vanderburgh; (NW) Dubois, Perry.

¹⁰ Recall that clock time did not change for all counties in the control group, but for different reasons. The policy had no effect on the SE and SW counties, but clock time did not change for the NW counties because the first practice of DST and the switch in time zones occurred simultaneously.

portion of people living on farms is small. All four sets of counties are similar with respect to median age and average household size. Electric heat is more common in the eastern counties, and income is higher in the southern counties, where average commute times are also somewhat higher.

We obtained data on residential electricity consumption from Duke Energy, which provides electrical service in southern Indiana to the majority of households in the counties shown in Figure 2.¹¹ The dataset consists of monthly billing information for all households serviced by Duke Energy in the study area from January 2004 through December 2006. All households in the service area faced the same standard residential rate, and there were no rate changes between 2004 and 2006.

Several variables are important for our analysis. The *meter position* is a unique number for each electricity meter. We refer to these positions as *residences*, and for each one, we have data for its *zip code* and *county*. For each monthly observation at each residence, we also have codes that identify which ones belong to the same *tenant*. This enables us to account for the fact that people move and to identify the observations that belong to the same tenant within each residence.¹² Each observation includes *usage amount*, which is electricity consumption in kilowatt-hours (kWh), and *number of days*, which is the number of calendar days over which the usage amount accumulated. With these two variables, we are able to calculate *average daily consumption* (ADC). Finally, each monthly observation includes a *transaction date*, which is the date that the usage amount was recorded in the utility company's centralized billing system.

The actual read-date of each meter occurs roughly every 30 days and is determined according to assigned billing cycles. Residences are grouped into billing cycles and assigned a cohort number for one of 21 monthly read-dates (i.e., the weekdays of a given month). Meters are read for billing cycle 1 on the first weekday of each month, billing cycle 2 on the second

¹¹ Cinergy formerly provided electrical service in southern Indiana but was acquired by Duke Energy in 2005. Alternative electrical service providers are the investor-owned utility Vectren and rural electric membership cooperatives.

¹² The data does not permit us to follow tenants from one residence to another, but this is not a limitation for our analysis.

weekday, and so forth throughout the month. This staggered system allows the utility company to collect billing information and provide 12 bills to customers on an annual basis. In a separate file, we obtained data on the assigned *billing cycle* for each meter position. We then merged these datasets so that each monthly observation is associated with its assigned *read-date*, according to Duke Energy's billing-cycle schedule.

We also collected and merged data on weather. Data on average daily temperature were obtained from the National Climatic Data Center.¹³ We collected these data for every day in 2004 through 2006 from 60 different weather stations in southern Indiana and neighboring Kentucky. For each day and all 60 weather stations, we calculated heating and cooling degree days, as these provide standard metrics for explaining and forecasting electricity demand. The reference point for calculating degree days is 65° Fahrenheit (F). When average daily temperature falls below 65° F, the difference is the number of heating degrees in a day. When average daily temperature exceeds 65° F, the difference is the number of cooling degrees in a day. We then matched each residence to a climate station using its zip code and a nearest-neighbor GIS approach; and for each observation, we collected the exact days corresponding to the dates of the billing cycle. Heating degrees in each day were summed over the days in the billing cycle to yield the heating degree days variable for each monthly observation. A parallel procedure was used to create the cooling degree days variable. We then used the number of days for each observation to calculate variables for *average heating degree days (AHDD)* and *average cooling degree days (ACDD)*. This approach gives nearly residence-specific weather data for each billing cycle.

The original dataset included 7,949,207 observations, 229,818 residences, and 413,802 tenants; however, several steps were taken, in consultation with technical staff at Duke Energy, to clean and prepare the data. In order to focus on the most regular bills, we first dropped all observations that had a number of days less than 15 and greater than 35 (1.52 percent of the

¹³ These data are available online at www.ncdc.noaa.gov/oa/ncdc.html.

data).¹⁴ We also dropped all of the observations for which the transaction date did not closely align with the scheduled billing cycle. The vast majority of transaction dates fall within 0 to 3 days after the scheduled read-date, as meter-readers typically enter data into the system on the following workday. Those with transaction dates that were more than one day earlier than the scheduled read date or more than 5 days later were deemed irregular and dropped (an additional 5.20 percent of the data). Finally, we considered irregular and dropped all observations that had less than 1 kWh for average daily consumption (an additional 1.76 percent of the data). The final dataset includes 7,267,392 observations, 223,889 residences, and 384,083 tenants.

Table 2 reports descriptive statistics disaggregated into the different sets of counties and combined. Reflecting the relative populations, the majority of data come from the NE counties, followed by those in the SE, with fewer in the western counties. Average daily consumption—between 35 and 36 kWh/day—is very similar among all sets of counties. As expected, average cooling degree days is higher in the south counties, while average heating degree days is higher in the north counties.

Figure 3 illustrates average daily consumption and the weather variables graphically for each month in the dataset. We show the natural log of ADC separately for the control and treatment sets of counties, along with AHDD and ACDD. The first thing to note, which is to be expected, is the close correspondence between ADC and the weather variables. Electricity demand is greater in months with high AHDD and ACDD. Also worth noting are the differences between the treatment and control groups. Inspection of the trends for ADC reveals that the control group tends to have greater electricity demand during the DST periods, while the treatment group tends to have greater electricity demand during the non-DST periods. It appears that differences in AHDD and ACDD influence this pattern, as the control group tends to be hotter during the DST periods, and the treatment group tends to be colder during the non-DST

¹⁴ The cutoff at 15 days is standard in econometric analysis of residential electricity demand (e.g., Reiss and White 2003), and Duke Energy considers bills with more than 35 days irregular.

periods. These patterns underscore the importance of accounting for weather when trying to explain variation in electricity demand.

4. Empirical Analysis

Indiana's 2006 change to DST policy provides a natural experiment for identifying the effect of DST on residential electricity demand. As mentioned previously, the approach is based on a comparison between the treatment and control groups of counties. Referring back to in Figure 1, recall that the NE counties began practicing DST for the first time in 2006. The other sets of counties either practiced DST for all the years 2004 through 2006, or had no change in clock time during the DST period in 2006 due to the offsetting effect of changing time zones. Our identification strategy thus comes from a difference-in-differences (DD) comparison between the two groups, before and after the DST policy change.¹⁵

We begin with a simple comparison of means for average daily consumption. First consider only the monthly electricity bills with start- and end-dates entirely within the DST period of each year. The first two columns of Table 3 report *lnADC* for both the treatment and control groups, before and after the policy change. We also report the before-after difference and the DD between groups. These comparisons indicate that electricity demand increased for both groups, but demand increased 1.9 percent more in the treatment group. While this result suggests that DST may increase electricity demand, the simple comparison of means does not provide a formal test, nor does it control for other variables that may be changing differentially over time between groups, namely weather.

As a point of comparison, we conduct the same procedure using electricity bills with start- and end-dates entirely outside the DST period of each year. This calculation can be

¹⁵ An alternative identification strategy is to compare the DST and non-DST periods with a DD approach in the years prior to the policy change. This strategy relies on the assumption that different sets of counties would have the same differences in consumption at different times of the year, if not for the differential practice of DST. We find this assumption less plausible because of the potential confounders of differences in the distribution of air conditioning and/or electric heat. Although not reported in the paper, we estimate models using this approach and find results with magnitudes nearly twice as large as those presented here. The following estimates should therefore be considered conservative.

thought of as a quasi-counterfactual because it provides an estimate of how the two groups differ in their differences to 2006 during the non-DST period of the year, when there was no policy change.¹⁶ We again find that electricity demand increased for both groups, but in this case, demand increased 0.91 percent less in the treatment group. The fact that this result, when there was no policy change, has a lower magnitude and the opposite sign provides further evidence that DST may increase electricity demand.

To more rigorously investigate the DST effect on residential electricity demand, we estimate standard DD, treatment-effects models. We once again begin using only electricity bills that fall entirely within the DST period of each year.¹⁷ Our regression models have the following general specification:

$$(1) \quad \ln ADC_{it} = \delta Year2006_t \times NE_i + f(ACDD_{it}, AHDD_{it}, NE_i) + \theta_t + \nu_i + \varepsilon_{it},$$

where subscripts i denote tenants, $Year2006_t$ is a dummy variable for whether the observation occurs during 2006, NE_i is a dummy variable for whether the residence is in the NE set of counties, θ_t is a time-specific intercept, ν_i is a tenant-specific intercept, and ε_{it} is the error term. Equation (1) does not specify a particular functional form for the weather variables because we try several different specifications, some of which allow the effect of weather to differ between the treatment and control groups. The estimate of δ is of primary interest, as it captures the average DD in electricity demand for 2006 between the treatment and control groups. Again, the key identification assumption here is that, after controlling for differences in weather and time-invariant unobserved heterogeneity among tenants, electricity demand would have followed the same trend in the treatment and control groups, but for the effect of the change in DST.

¹⁶ For this calculation, we exclude electricity bills in the NW counties during November and December of 2006, when and where there is the confounding effect of a time-zone change.

¹⁷ To be even more specific, for these DST and non-DST models, we drop the monthly electricity bills that straddle the date of transition in or out of DST; however, later in this section we use these dropped observations to estimate the DST effect at the spring and fall transitions.

All standard errors are clustered at the billing-cycle within each county in order to make statistical inference robust to potential serial and spatial correlation. The importance of considering serial correlation in DD estimation is well known (see Bertrand et al 2004), and clustering at this level accounts for potential serial correlation of household electricity demand. Clustering at the billing-cycle also has the advantage of accounting for potential serial correlation due to the timing of meter reads earlier or later in the month, which is not captured with month-year dummies used to control for the time trend in specification (1). The relatively broad level of clustering should also allay concerns about potential spatial correlation. Within counties, billing cycles are closely aligned with neighborhoods because they are designed as meter-reading walking routes. The clustering thus accounts for spatial correlation that may arise because of neighborhood characteristics, such as the density of housing, type and date of construction, and possibly socio-economic characteristics.

Table 4 reports the fixed-effects estimates of equation (1). We include four specifications that account for weather in different ways. The variables ACDD and AHDD enter linearly in models (a) and (b). The only difference is that model (b) includes interactions with the treatment group so that weather is allowed to affect electricity demand differently in the treatment and control groups. The models in columns (c) and (d) are more flexible, with dummy variables for ACDD and AHDD binned at each integer. This includes 18 dummies for ACDD and 16 dummies for AHDD. In parallel, the only difference in model (d) is that each weather dummy variable is also interacted with the treatment group to allow differences in the effect of weather between groups. The estimate of δ for all four models is positive, highly statistically significant, and of similar magnitude. The estimates fall between 0.008 and 0.0103. The interpretation is that DST causes an increase in electricity demand that ranges from 0.8 to 1.03 percent over the entire DST period.

Table 5 reports the fixed-effects estimates for the quasi-counterfactual experiment. Using only data for the non-DST period of each year, we estimate a slightly modified version of equation (1). To take advantage of all the data, we include an additional dummy variable,

NWchg2006, to account for the time-zone change that occurred in the NW counties at end of 2006. Another difference is that models (c) and (d) do not include dummy variables for ACDD, as there are exceedingly few cooling degree days in Indiana during the non-DST period of the year. These models do, however, include 32 dummy variables for AHDD, which are also interacted with the treatment group in model (d). All estimates of the quasi-counterfactual DST effect are negative and have relatively small magnitudes, ranging from 0.3 percent to 0.6 percent. While three of the four estimates are not statistically distinguishable from zero, despite having close to 2.4 million observations, the coefficient in model (c) is marginally, statistically significant. Generally, we interpret these results in support of our key identification assumption that the trend in electricity demand is similar between the treatment and control groups of counties, other than for the change in DST policy and differences due to weather.

We now disaggregate our estimate of the overall DST effect into monthly estimates in order to investigate whether the effect of DST differs throughout the year. In particular, we estimate equation (1) separately for each month of the year based on the meter-read date. Following the same practice, we estimate equations for both the DST and non-DST periods, and we continue to exclude observations that straddle the DST transitions, meaning that we do not have monthly models for April or November. For simplicity, we report disaggregated estimates consistent with inclusion of the weather variables in column (a) in Tables 4 and 5.¹⁸ Rather than report each of the 10 equations, we focus on estimates of δ , that is, the DST and quasi-counterfactual effects. We illustrate these results graphically in Figure 4, along with the 95-percent confidence intervals (standard errors are again clustered at the county \times billing-cycle level). We find that the effect of DST is not statistically different from zero in May and June. It is, however, positive and statistically significant for the months July through October, with magnitudes ranging from 1 to 2 percent. As expected, during the non-DST months, we find no statistically significant differences between the treatment and control groups.

¹⁸ Alternative specifications of the weather variables have little affect on the estimate interest.

The fact that monthly billing data is structured around billing cycles—with consistent read-dates within each month—allows us to decompose the estimates even further. We separate the observations into billing cohorts where the month is divided into three segments: those with read-dates in the first third of the month, the second third of the month, and the last third of the month.¹⁹ We then estimate parallel models for each cohort in each month. In effect, this disaggregates the monthly estimates into third-of-month estimates. These results are shown in Figure 5. We again do not find consistent evidence for DST effects in May and June, yet through the DST period, there is a clear upward trend. In the later half of the DST period, nearly every estimate indicates that DST causes an increase in electricity consumption, with the effect appearing to be strongest during the October read-dates, when estimates range between 2 and 4 percent. In the non-DST periods, all coefficients except one are not statically different from zero, as one would expect if the DST periods are identifying the effect of changing the clock.

The final set of models that we estimate take advantage of the monthly observations that straddle the transition dates in and out of the DST period. We have thus far dropped these observations from the analysis, but we now use them to focus on estimates of the DST effect at the time of transition. In parallel with equation (1), we estimate models for the spring and fall transitions that have the following form:

$$(2) \quad \ln ADC_{it} = \delta DSTfrac \times Year2006_t \times NE_i + \beta_1 ACDD_{it} + \beta_2 AHDD_{it} + \gamma_1 Year2005_t + \gamma_2 Year2006_t + v_i + \varepsilon_{it},$$

where the main difference is the interaction of *DSTfrac* with the treatment-effect variable.²⁰ This new term is the fraction of the number of days in the billing cycle that are in the DST pe-

¹⁹ Because there are 21 billing cycles in each month, this procedure means that there are 7 billing cycles in each cohort. In principle, we could estimate the DST effect for each billing cycle separately, rather than combining them into cohorts. But there is a tradeoff between having more precisely timed estimates and having less data upon which to estimate the effect. We thus follow the segmentation in Reiss and White (2003), whereby 7 billing cycles are combined into one cohort.

²⁰ We again report only specifications in which the weather variables enter linearly and without interactions with the treatment group.

riod. Once again, the coefficient δ is of primary interest, and its interpretation remains the same: the percentage change in average daily consumption due to the practice of DST. But here the effect is identified off of marginal changes in the number of days in DST.

Table 6 reports the fixed-effects estimates of equation (2) for both the spring and fall models. For the spring transition, we find a positive and statistically significant effect, with a magnitude of approximately 1.2 percent. The coefficient estimate for the fall transition model is also positive, but has a very small magnitude and is not statistically different from zero. While both of these transition results are of interest, they should be interpreted with caution because they are based on an attempt to extract a daily effect out of inherently monthly data. This, of course, makes it difficult to precisely estimate the effect. The same caution does not apply, however, to the estimates reported previously, where the models are based on data for which all days in the monthly billing cycle are subject to the same treatment effect.

5. Discussion

In this section we consider two questions. First, what are the underlying mechanisms that give rise to the estimates of the DST effect on residential electricity consumption? To answer this question we provide evidence from an engineering simulation model. Second, given that DST causes an overall increase in residential electricity consumption, what are the costs? We answer this question in terms of increased residential electricity costs and the social costs of increased pollution emissions.

A. Engineering Simulations

We ran simulations on eQuest, an interface program based on a versatile U.S. Department of Energy simulation model of a building's energy demand, including electricity.²¹ The program has standardized design parameters for various building types, but all parameters can be altered

²¹ The program description and download can be found at www.doe2.com. eQuest has the complete DOE-2 (version 2.2) building energy use simulation program embedded. Rock (1997) uses an older version of DOE-2.

by the user. We ran many simulations with different sets of parameters based on advice we received from program experts. While the numerical estimates differ among simulations, the general pattern of results remains the same. Here we report the results for a single family residence in southern Indiana with parameter settings thought to be most representative.²² Embedded in the software is hourly weather data averaged from 1961 through 1990. Using 2006 as the calendar year, we ran simulations for the DST periods of the year, with and without the option to implement DST.

The first column of Table 7 reports the simulated percentage change in electricity consumption by month. Electricity consumption increases in 6 out of the 7 months. The only month associated with a savings is July, and the magnitude is less than half of a percent. The increased consumption that occurs in the spring months of April and May, at approximately 0.7 and 1.7 percent, respectively, tapers off in mid-summer. By September and October the simulated increase in consumption is well over 2 percent. Note that the pattern of these results is similar in many respects to our estimates in the previous section. We found some evidence, based on the model presented in Table 6, of an increase in electricity consumption at the time of transition in April. Referring back to Figure 5, we also found that the largest increases in consumption occur in late summer and early fall. In particular, the October read-dates, which reflect half of September's consumption because there is nearly a 30-day lag on average, have magnitudes of increased electricity consumption that are very similar to the predictions of the simulation model.

²² Details about the program settings for the results presented here are the following: We use the multi-family, low-rise schematic to model a single-family dwelling in Evansville, IN. The dwelling is a single-story, wood-frame construction, front and rear entry points with appropriate square footage for a family of four (~1800 sq ft). The rectangular footprint (35' x 51') is oriented N-S in the lengthwise direction, with doors on both N and S sides. We modify the roof to 'pitched' with recommended default settings. Day lighting controls are set at 100 percent to simulate electricity-use change due to daylight relative to clock-time. Occupancy schedules are default, based on daytime work and leisure outside of the home. Heating in the residence is forced-air resistance electric, and cooling is typical Freon-coil air conditioning. Seasonal thermostat set points to initiate the HVAC system for occupied are 76F for cooling and 68F for heating, for unoccupied 80F and 65F, respectively. Fans are cycled intermittently at night, except are shut off from midnight to 4am. Further details about the simulations and results are available upon request.

Beyond corroboration of our findings, the value of the simulation exercise is that we can decompose electricity consumption into its component parts. The last three columns in Table 7 report the simulated change in average daily consumption by month for lighting, cooling, and heating separately. In all months, other than October, DST saves on electricity used for lighting; therefore, it appears that the “Benjamin Franklin effect” is occurring. But when it comes to cooling and heating, the clear pattern is that DST causes an increase in electricity consumption. The changes in average daily consumption are far greater for cooling, which follows because air-conditioning tends to draw more electricity and DST occurs during the hotter months of the year.

These results indicate that the findings of Shimoda *et al.* (2007) for Japan apply to Indiana as well. Moving an hour of sunlight from the early morning to the evening (relative to clock time) increases electricity consumption for cooling because (i) demand for cooling is greater in the evening and (ii) the build-up of solar radiation throughout the day means that the evening is hotter. Though not shown here, this is precisely the pattern that we find in the simulated daily electricity profiles for each month. In some months, as can be seen in Table 7, the cooling effect outweighs the Benjamin Franklin effect.

There is also evidence for a heating effect that causes an increase in electricity consumption. When temperatures are such that heating is necessary, having an additional hour of darkness in the morning, which is the coldest time of day, increases electricity consumption. Kellogg and Wolff (2006) find evidence for the heating effect in their study of DST extensions in Australia. While the magnitude of the heating effect does not appear to be as large in our Indiana simulation results, it is likely to be more substantial when considering extensions to DST, which push further into the colder and shorter days of the year.

B. Costs of DST in Indiana

To begin calculating the costs of DST in Indiana, we need to establish the baseline of what electricity consumption would be without the practice of DST. We take advantage of all the

data during the DST period to establish the baseline. For all observations that were subject to DST, we subtract the estimate of 0.96 percent that comes from model (a) in Table 4. Average daily consumption is then calculated from these adjusted observations and all others that were not subject to DST, yielding an overall estimate of 30.12 kWh/day. It follows that the effect of DST—under the pre-2007 dates of practice—is an increase in consumption for the average residence of 61.01 kWh/year (i.e., $0.0096 \times 30.12 \text{ kWh/day} \times 211 \text{ days/year}$). Extrapolating this estimate to all 2,724,429 households in the state of Indiana implies that DST increases statewide residential electricity consumption by 166,217 megawatt hours per year (MWh/year).

With this estimate, it is straightforward to derive the increased residential electricity costs per year. The average price paid for residential electricity service from Duke Energy in southern Indiana is \$0.054/kWh. Multiplying this price by the change in a household's consumption implies a residential cost of \$3.29 per year. Extrapolating once again to the entire state yields a cost of \$8,963,371 per year in residential electricity bills due to the practice of DST.²³

The statewide increase in electricity consumption of 166,217 MWh/year also provides the basis for calculating the social costs of pollution emissions.²⁴ We follow the general approach used in Kotchen *et al.* (2006). The first step is to determine the fuel mix for electricity generation. According to the Energy Information Administration (EIA 2006), the fuel mix for generation in Indiana is 94.8 percent coal, 2 percent natural gas, 0.1 percent petroleum, and 4.9 percent from other sources (gases, hydroelectric, and other renewables). We assume the change in generation due to DST comes entirely from coal, as it accounts for such a vast majority of the state's electricity generation. Emission rates—in tons of emissions per MWh of electricity generation from coal—are taken from Ecobilan's Tool for Environmental Analysis and Man-

²³ A more precise estimate would account for price differences in different areas of the state. But the estimate presented here should be treated as an underestimate. According to the Energy Information Administration (EIA 2006) the average retail price of electricity throughout Indiana in 2006 was \$0.0646/kWh. At this price, the increased cost to residential electricity bills is \$10,737,645 per year.

²⁴ The focus on changes in consumption rather than generation means that we do not take account of transmission and distribution losses, which can be substantial. This is one respect in which the social costs of pollution emissions reported here should be treated as conservative.

agement (TEAM) model, which is a life-cycle assessment engineering model (Ecobitan 1996). The first column in Table 8 reports the marginal emissions for carbon dioxide, lead, mercury, methane, nitrogen oxides, nitrous oxide, particulates, and sulfur dioxide. The second column reports the change in emissions for each pollutant, which is simply the product of marginal emissions and the change in overall electricity generation.

The next step is to quantify the marginal damages of each pollutant. For this we use a benefits transfer methodology and report low- and high-marginal damage scenarios where possible. The two exceptions are mercury and sulfur dioxide. We have only one estimate for mercury, and the values for sulfur dioxide are the tradable permit price in 2007, rather than the marginal damages. The reason for using the sulfur permit price is that total emissions are capped, so the marginal costs are reflected in the permit price, as the increase in emissions due to DST must be abated somewhere because of the binding cap. Table 8 reports the range of values in 2007 dollars for all pollutants, and we refer readers to Kotchen *et al.* (2006) for details on the specific references for each estimate.

The final step is to simply multiply the marginal damages by the change in emissions for each pollutant. The last two columns of Table 8 report these total damage costs for each pollutant, for the low and high scenarios. After summing the results across all pollutants, the low and high estimates for the social costs of emissions are approximately \$1.7 million and \$5.5 million per year. In the low scenario, increases in carbon dioxide, particulates, and sulfur dioxide account for the vast majority of the costs. In the high scenario, increases in carbon dioxide account for a much greater share of the costs, with the difference reflecting uncertainty about the economic impacts of climate change. In both scenarios the costs of increases in lead, mercury, and methane are negligible.

6. Conclusion

The history of DST has been long and controversial. Throughout its implementation during World Wars I and II, the oil embargo of the 1970s, more consistent practice today, and recent

extensions, the primary rationale for DST has always been the promotion of energy conservation. Nevertheless, there is surprisingly little evidence that DST actually saves energy. This paper takes advantage of a unique natural experiment in the state of Indiana to provide the first empirical estimates of DST effects on electricity consumption in the United States since the mid-1970s. The results are also the first-ever empirical estimates of DST's overall effect.

Our main finding is that—contrary to the policy's intent—DST results in an overall increase in residential electricity demand. Estimates of the overall increase in consumption are approximately 1 percent and highly statistically significant. We also find that the effect is not constant throughout the DST period: there is some evidence for an increase in electricity demand at the spring transition into DST, but the real increases come in the fall when DST appears to increase consumption between 2 and 4 percent. These findings are generally consistent with simulation results that point to a tradeoff between reducing demand for lighting and increasing demand for heating and cooling. According to the dates of DST practice prior to 2007, we estimate a cost to Indiana households of \$9 million per year in increased electricity bills. Estimates of the social costs due to increased pollution emissions range from \$1.7 to \$5.5 million per year.

Although this paper focuses exclusively on residential electricity consumption, it is likely to be the portion of aggregate electricity demand that is most responsive to DST. Changes in the timing of sunrise and sunset occur when people are more likely to be at home, where and when behavioral adjustments might occur. Commercial electricity demand, in contrast, is likely to be greatest at inframarginal times of the day and generally less variable to changes in the timing of daylight. But future research that accounts for commercial and industrial electricity demand would be useful.

It is also worth considering how the results reported here might generalize to other locations in the United States. Answers to this question are, of course, limited by the fact that Indiana is the only place where such a natural experiment has occurred. There are nevertheless several reasons we might infer that DST increases electricity demand across a much broader area.

First, existing simulations suggest that DST increases electricity consumption on average over 224 different locations throughout the United States (Rock 1997). Our results also corroborate the results of such simulation exercises. Second, even when prior research finds little or no electricity savings from DST in the United States, the effect is smaller in more southern regions (DOE 2006). Finally, the fact that we identify the underlying tradeoff between artificial illumination and primarily air-conditioning suggests that the DST effect that we estimate is likely to be even stronger in the more populated, southern regions of the United States. Further south, the days are shorter during the summer, meaning that decreases in electrical use from lighting are likely to be smaller, and air conditioning is more common and intensively used, meaning that increases in electricity for cooling are likely to be bigger.

The results of this research should inform ongoing debate about the recent extensions to DST that took place in 2007. As mentioned earlier, the Energy Policy Act of 2005 requires that research be conducted to evaluate whether the extensions yield conservation benefits. While our results suggest that the extensions to DST are most likely to increase, rather than decrease, demand for residential electricity, further research is necessary to examine the effects of the extensions themselves. At present, we are still awaiting release of the official Department of Energy study.

In conclusion, we find that the longstanding rationale for DST is questionable, and if anything, the policy seems to have the opposite of its intended effect. Nevertheless, there are other arguments made in favor of DST. These range from increased opportunities for leisure, enhanced public health and safety, and economic growth. In the end, a full evaluation of DST should account for these multiple dimensions, but the evidence here suggests that continued reliance on Benjamin Franklin's old argument alone is now misleading.

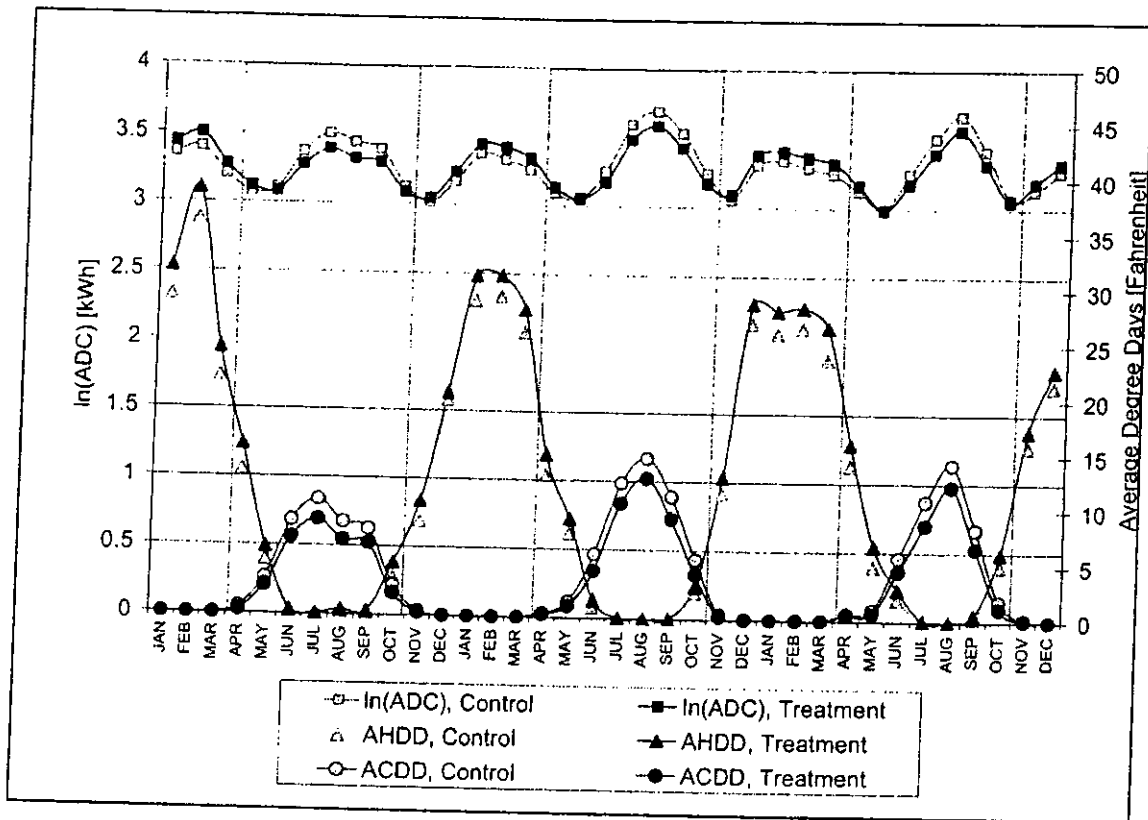


Figure 3: Average daily consumption, average heating degree days, and average cooling degree days by month 2004-2006 for the control and treatment sets of counties

Table 1: U.S. Census data for different sets of counties in southern Indiana

Census variable	Set of counties				Total
	SE	SW	NE	NW	
Number of counties	4	3	14	4	25
Total population	247,729	111,944	506,932	92,282	958,887
Proportion of population rural	0.389	0.456	0.493	0.537	0.466
Proportion of population rural and farm	0.018	0.029	0.032	0.063	0.031
Median age	36.5	37.6	35.9	37.4	36.4
Number of households	96,011	42,490	195,597	35,748	369,846
Average household size	2.5	2.6	2.5	2.5	2.5
Proportion households with electric heat	0.313	0.284	0.334	0.218	0.311
Median household income in 1999	\$42,964	\$43,505	\$38,076	\$33,717	\$39,553
Average per capita commute time (minutes)	12.00	11.18	10.58	9.56	10.92

Notes: All data taken from the 2000 U.S. Census. Cells weighted appropriately by either population or number of households.

Table 2: Descriptive statistics for different sets of counties in the data set

Variable	Set of counties				Total
	SE	SW	NE	NW	
Observations	1,295,108	316,746	5,097,035	558,503	7,267,392
Residences	39,643	9,595	157,477	17,174	223,889
Tenants	66,148	14,387	276,339	27,209	384,083
Average daily consumption (kWh/day)	35.10 (25.26)	35.91 (26.08)	35.86 (28.99)	35.00 (26.95)	35.66 (28.08)
Average cooling degree days	4.01 (5.09)	3.88 (4.92)	3.14 (4.18)	3.59 (4.53)	3.36 (4.43)
Average heating degree days	11.19 (11.29)	11.86 (11.82)	12.91 (12.44)	12.47 (12.30)	12.53 (12.23)

Notes: Standard deviations reported in parentheses.

Table 3: Differences in average daily consumption between 2004-2005 and 2006

	DST period		Non-DST period	
	Treatment:	Control:	Treatment:	Control:
	NE	SE, SW, NW	NE	SE, SW, NW
Years 2004-2005	3.1256	3.2239	3.2940	3.2147
Year 2006	3.1814	3.2607	3.3068	3.2366
Difference	0.0558	0.0368	0.0128	0.0219
Difference-in-difference (DD)	0.0191		-0.0091	

Notes: Average daily consumption reported as *InADC*. In order to account for the unbalanced panel, we first calculate averages within tenants and then average between tenants. Difference is interpreted as the percentage change from years 2004-2005 to year 2006. Difference-in-difference is the percentage difference in the treatment group compared to the control group. Differences may not compute exactly due to rounding. For the non-DST control group, we exclude electricity bills in the NW counties during Nov. and Dec. of 2006, when and where there was a policy change due to the shifting of time zones

Table 5: Quasi-counterfactual non-DST period fixed-effects models for changed average daily consumption in 2006

	(a)	(b)	(c)	(d)
Year 2006 × Treatment group	-0.0030 (0.0029)	-0.0004 (0.0028)	-0.0064* (0.0031)	-0.0029 (0.0031)
Average cooling degree days (ACDD)	0.0065 (0.0292)	-0.0483** (0.0178)	0.0244 (0.0248)	-0.0060 (0.0211)
Average heating degree days (AHDD)	0.0150** (0.0004)	0.0144** (0.0005)	--	--
ACDD × Treatment group	--	0.1008* (0.0494)	--	0.0453 (0.0424)
AHDD × Treatment group	--	0.0008 (0.0005)	--	--
ACDD dummies	--	--	--	--
AHDD dummies	--	--	Yes	Yes
ACDD dummies × Treatment group	--	--	--	--
AHDD dummies × Treatment group	--	--	--	Yes
NWchg2006	0.0062 (0.0077)	0.0039 (0.0076)	0.0041 (0.0079)	0.0015 (0.0076)
Month-year dummies	Yes	Yes	Yes	Yes
Observations	2,374,790	2,374,790	2,374,790	2,374,790
Tenants	340,328	340,328	340,328	340,328
R-squared (within)	0.080	0.080	0.080	0.081

Notes: The left-hand side variable is *lnADC*. Standard errors, reported in parentheses, are clustered at the county × billing-cycle level, of which there are 387 clusters. Models (c) and (d) include 31 categories for AHDD, and each of these dummy variables is interacted with the treatment group in model (d). ** and * indicate statistical significance at the 99- and 95-percent levels, respectively.

Table 7: Simulation results for changes in monthly electricity demand due to DST

	DST effect	Difference in average daily consumption (DST – no DST)		
		Lighting	Cooling	Heating
April	0.73%	-4.1	6.8	2.2
May	1.69%	-6.0	10.5	4.4
June	0.03%	-7.5	6.8	0.4
July	-0.05%	-7.5	6.7	0.0
August	0.60%	-5.7	9.7	0.0
September	2.31%	-1.9	11.7	2.6
October	2.39%	2.4	10.4	1.8
Overall	0.98%	-4.5	9.1	1.7

Notes: Simulation results based on 2006 simulations in southern Indiana. Quantities reported in the last three columns are changes in average daily consumption (kWh/day) due to DST for the period indicated. DST effect is the percentage change and does not correspond exactly to the percentage change in lighting, cooling, and heating, as the overall effect also captures other relatively small changes in electricity consumption.

Table 8: The social costs to Indiana of Pollution emissions from DST

	Emissions (tons/MWh)	Δ emissions (tons)	Marginal damages		Total damages	
			Low	High	Low	High
Carbon dioxide	1.134E-00	188,490.08	\$2.82	\$20.55	\$531,485	\$3,872,566
Lead	6.752E-07	0.11	\$572.52	\$2,457.32	\$64	\$276
Mercury	2.490E-08	0.00	\$58.90	\$58.90	\$0	\$0
Methane	1.336E-05	2.22	\$79.96	\$343.16	\$178	\$762
Nitrogen ox- ides	5.275E-03	876.79	\$77.20	\$179.41	\$67,686	\$157,304
Nitrous oxide	4.868E-05	8.09	\$853.54	\$7,690.35	\$6,906	\$62,226
Particulates	8.540E-04	141.95	\$954.91	\$3,282.86	\$135,548	\$465,999
Sulfur dioxide	1.060E-02	1,761.90	\$518.98	\$518.98	\$914,391	\$914,391
Total					\$1,656,259	\$5,473,524

Notes: Emissions (tons/MWh) taken from Ecobilan's TEAM model, copyright 2006. Δ emissions are the product of emissions and the DST change in electricity consumption of 166,217 MWh/year. All dollars values are reported in 2007 dollars.

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COMMERCE

NFIB

The Voice of Small Business

ALASKA

January 31, 2010

The Honorable Anna Fairclough
State Capitol Building
Juneau, Alaska 99801-1182

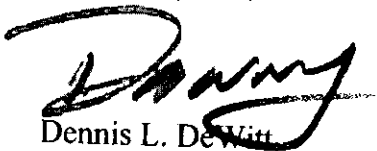
Dear Representative Fairclough:

RE: House Bill 19

On behalf of the National Federation of Independent Business/Alaska, I wish to respectfully share our support for House Bill 19 that eliminates daylight savings time in Alaska. The National Federation of Independent Business is the largest small-business advocacy group in Alaska.

In our 2010 member ballot, NFIB/AK members voted overwhelmingly that Daylight savings time should be eliminated in Alaska. We believe its original purpose is long past and it has no current value. The change from five to two time zones in Alaska's northern latitude has created a situation where changing time in the spring and fall makes little sense. Thus, while it may be a nice idea elsewhere, it is a cumbersome activity that provides no real value to Alaskans.

Sincerely yours,



Dennis L. DeWitt
Alaska State Director

Cc: NFIB/AK Leadership Council



First National Bank
ALASKA

D. H. CUDDY, PRESIDENT

March 13, 2009

Representative Anna Fairclough
House of Representatives, Room 411
State Capitol, Juneau, AK 99801-1182
Mailstop: 3100

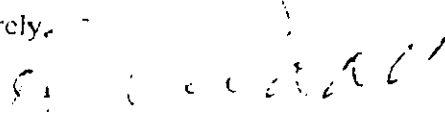
Re: House Bill 19: Repeal of Daylight Saving Time

Dear Representative Fairclough:

For many reasons, the Daylight Saving Time law should be repealed. Some of the principal reasons are as follows:

- By the first of March, I am going to work in the daylight, but when the law mandates that I turn the clocks forward, I am going to work in the dark again. Either way, it is daylight when I drive home at night. Therefore, Daylight Saving Time causes me to *lose* daylight during business hours.
- I have long believed that Daylight Saving Time wastes energy over the course of a year, and a recent study cited by *Fast Company* magazine has found this to be the case.
- Daylight Saving Time is an anachronism that originated in response to political and climactic factors in World War I England which have no relevance in Alaska in 2009.
- It would be nice to be on the same time schedule as the Pacific Coast at least six months out of the year, but Daylight Saving Time prevents that.
- Daylight Saving Time is just a complete nuisance and inconvenience, twice a year, and it accomplishes nothing in the state of Alaska.

Sincerely,


D. H. Cuddy,
Chairman and President

DHC:lb

Corporate Headquarters • 101 W. 36th Avenue • P.O. Box 100720 • Anchorage, AK 99510-0720
907/777-3555 • FAX: 907/777-3003 • www.FNBAlaska.com • Member FDIC





February 5, 2010

Representative Anna Fairclough
Room 421
State Capitol
Juneau, AK 99801-1182

Re: HB 19

Dear Representative Fairclough,

We understand and appreciate your reasons for introducing HB 19, eliminating Daylight Savings time in Alaska. I feel it necessary, however, to let you know how the bill would negatively affect television broadcasters in Alaska.

You may remember that prior to the beginning of satellite television in 1984, television programs aired in Alaska on a one-week or two-week delay. The business of selling advertising to agents on the east coast was largely conducted by mail. Neither is the case today.

KTUU airs most of its programming at the same time it airs in LA. Our feed for NBC Nightly News, for example, comes in at 5:28:30pm and airs live. It begins in LA at 6:28:30pm. Our prime time line-up airs 7-10pm, while in LA prime time is scheduled from 8 to 11pm. The proposal in front of you would require that entire blocks of programming would have to be recorded and played back at an appropriate time, requiring additional investment in equipment and personnel.

Children's programming is also a concern. We are required by the FCC to air three hours each week of programming targeted to meet the educational needs of children. That programming must air in consistent time periods, no earlier than 7am. NBC schedules weekend sports to begin at 2pm ET, or 10AM AK. We air our children's programming from 7am to 10am on Saturday.

The business of negotiating and selling advertising across time zones is always a challenge when doing business with, or from, Alaska. Adding another hour to our time difference adds to that difficulty.

I'm sure you're hearing from other businesses that interface with the "Lower 48." While the merits of Daylight Savings time in Alaska can certainly be debated, the merits of facilitating business relationships cannot. From our position as a broadcaster, exacerbating the time difference is an idea we cannot support.

Sincerely,

Susan Lucas
President/General Manager
Northern Lights Media Inc.
KTUU-TV

*Anna - I would love
to talk with you about
our perspective - Sus*

Northern Lights Media, Inc

701 East Tudor Road • Suite 220 • Anchorage, AK 99503-7488
(907) 762-9202 • Fax (907) 561-0882
www.ktuu.com

State IT Response

Rep. Anna Fairclough

From: Dubey, Anand (DOA) [anand.dubey@alaska.gov]
Sent: Monday, March 16, 2009 10:42 AM
To: Rep. Anna Fairclough
Cc: Crystal Koeneman, Petro, Rachael A (DOA), Brooks, Kevin A (DOA)
Subject: RE: HB 19 DST
Follow Up Flag: Follow up
Flag Status: Red

Representative Fairclough,
 Your IT specialists are correct.

Basically we have two scenarios in ETS:

- Scenario 1: Systems that we need to remediate every year to conform to DST
- Scenario 2: Systems that have been remedied and do not need to be updated every year

For scenario 1 we would not have remediate every year if DST was to go away.
 For scenario 2 we would have to change from DST to non DST one time.....I do not have a clear quantification of the amount of labor necessary to accomplish this one time fix for scenario 2.

Respectfully,

Anand Dubey
 Director
 ETS

From: Rep. Anna Fairclough [mailto:Representative_Anna_Fairclough@legis.state.ak.us]
Sent: Sunday, March 15, 2009 5:35 PM
To: Dubey, Anand (DOA)
Cc: Koeneman, Crystal (LAA)
Subject: RE: HB 19 DST

Director Dubey,

Thank you for your response

It appears, while we would have to do maintenance of our system, it is the same type of maintenance that we do when we change over to DST. Have I understood your comments correctly?

Our IT specialists informed me that each Personal Computer would not have to click the box as the Central Process Unit would reset and time-stamp the entire system to a specific time

Representative Fairclough

From: Dubey, Anand (DOA) [mailto:anand.dubey@alaska.gov]
Sent: Friday, March 13, 2009 3:41 PM
To: Rep. Anna Fairclough

**SARAH PALIN
GOVERNOR**

DEPARTMENT OF CORRECTIONS
Office of the Commissioner

550 W. 7th Ave. Suite 601
Anchorage, AK 99501
Phone: (907)269-7397
Fax: (907) 269-7390

March 17, 2009


Dear Representative Fairclough,

Thank you for your request for input on HB 19, the repeal of Daylight Saving Time. Departmentally we are taking a neutral stance on the issue and I would offer the following as issues and challenges we face in the implementation of Daylight Saving Time:

- (1) Each spring we pay for one hour not worked by every Correctional Officer on duty at the time we "spring forward" (a rough estimate would be 150-200 officers on duty at that time);
- (2) Each fall we pay an additional hour worked by every Correctional Officer on duty at the time we "fall back" (a rough estimate would be 150-200 officers on duty at that time);
- (3) The basic concept, as I understand it, is somewhat moot in Alaska due to the normal rapid increase in daylight that is occurring at the same time the time change is initiated.

Again, thank you for the opportunity to offer comment on the issue.

Sincerely,



Joe

cc: Dwayne Peebles
Sam Edwards

State of Alaska

Department of Revenue
Administrative Services Division



SARAH PALIN, GOVERNOR

333 Willoughby Avenue, 11th Floor

P.O. Box 110400

Juneau, Alaska 99811-0405

Phone: (907) 465-2300

Fax: (907) 465-2394

March 16, 2009

The Honorable Anna Fairclough
Representative
Alaska State Legislature
State Capitol, Room 421
Juneau, AK 99801-1182

Dear Representative Fairclough;

Upon the passage of HB 19, Alaska's daylight saving time would be eliminated. Every agency in the state was asked to respond as to any impact the time change might have on its operations. For the Department of Revenue, no direct fiscal impact would be realized, however, some operating functions would need to change.

Alaska's state employees who interact with east coast based financial institutions and advisors will have more limited hours in which to complete their communications. These employees include investment officers, equities managers and finance staff. Currently, most of the state's investment officers begin their work day at 5:00am when the trading floors open on the east coast. If HB 19 is passed, the department will need to make the choice of losing an hour of prime investment time or requiring certain employees to begin the work day an hour earlier for eight months of the year; 4:00am for investment officers. Of course, this change would have a similar impact on positions in Alaska's private financial sector as well.

Any Department of Revenue software application changes would be made within existing budgets.

Sincerely,

Ginger Blaisdell
Director

ALASKA STATE LEGISLATURE

SENATOR DONALD C. OLSON, CHAIR

SENATOR ALBERT KOOKESH
SENATOR JOE THOMAS
SENATOR HOLLIS FRENCH
SENATOR LINDA MENARD



ALASKA STATE CAPITOL
ROOM 514
JUNEAU, ALASKA 99801-1182
907) 465-3877
FAX: (907) 465-4821

SENATE COMMUNITY AND REGIONAL AFFAIRS COMMITTEE

TO: All Committee Members
FROM: Senator Donald Olson
RE: Committee Agenda
LOCATION: Beltz Rom 105 (TSB)
DATE/TIME: Thursday March 18 - 3:30 p.m.

AGENDA

I. Committee Hearings

1. HB 19 Eliminate Daylight Savings Time



Alaska State Legislature

Representative Anna Fairclough – House District 17

Date: March 1, 2010

To: Senator Donny Olson
Chair, Senate Community & Regional Affairs Committee

From: Representative Anna Fairclough

Re: CSHB 19 "An Act exempting the state and its political subdivisions from daylight saving time."

In direct response to a number of concerns raised by Alaskans, my constituents and various groups, such as K-12 educators, the elderly, northwestern rural communities, and others, our office has been researching the possible repeal of Daylight Saving Time (DST) in Alaska.

It is clear from two statewide polls done in 2004 and '05, that a strong majority of Alaskan's statewide favor the repeal of DST for a variety of reasons. As most of you know in 1983, with congressional approval, Alaska consolidated its five time zones into two. This was done to better consolidate our communities and to enhance public services.

Alaska Standard Time (AST) now covers most of our state, with only a few Aleutian Islands in the Hawaii – Aleutian Time Zone. AST is one hour earlier than Pacific Standard Time and four hours earlier than Eastern Standard Time.

Daylight Saving Time was actually an idea that originated as an American domestic policy during World War I to save energy.

I urge your careful consideration of the health issues we have raised, balanced with consideration of the impact to our business community. I request that you move to pass this bill out of committee and on to the Senate floor for a vote.

Thank you for your support,

Anna Fairclough

Representative Anna Fairclough

CC: Senator Joe Thomas
Senator Hollis French
Senator Albert Kookesh
Senator Linda Menard

Session: Alaska State Capitol • Juneau, AK 99801 • 907-465-3777 • Fax 907-465-2819

Interim: 10928 Eagle River Road, Suite 238 • Eagle River, AK 99577 • 907-694-8944 • Fax 907-694-8945

Representative_Anna_Fairclough@legis.state.ak.us

		<u>2010</u>	<u>2009</u>	
Q.17	What is your overall opinion of the leadership of the Alaska state legislature these days -- does it seem to be working better than it has in the past, about the same, or worse?	Better	19%	21%
		Same	63%	63%
		Worse	16%	13%
		Unsure	2%	3%
Q.18	How would you rate the job Governor Sean Parnell and the executive branch of state government is doing these days -- would you say...?	Strongly approve	12%	
		Somewhat approve	69%	
		Somewhat disapprove	12%	
		Strongly disapprove	2%	
		Unsure	5%	
Q.19	Do you currently have healthcare coverage?	Yes	86%	
		(Skip to Q.21) No	14%	
Q.20	How satisfied are you with your healthcare coverage? Would you say ...?	Very satisfied	40%	
		Mostly satisfied	47%	
		Mostly dissatisfied	9%	
		Very dissatisfied	3%	
		Unsure	1%	
Q.21	Generally speaking, do you strongly favor, somewhat favor, somewhat oppose or strongly oppose the healthcare reform plan proposed by President Obama and Congress?	Strongly favor	16%	
		Somewhat favor	20%	
		Somewhat oppose	12%	
		Strongly oppose	46%	
		Unsure	6%	
Q.22	In early March this year, Alaska will switch to Daylight Savings Time. In November, we will adjust our clocks and switch back again. What is your opinion about that -- do you support Alaska switching to Daylight Savings Time for the summer and then switching back in the fall, or should we leave our clocks the same throughout the year?	Switch clocks	41%	
		Leave the same	55%	
		Unsure	4%	

**PUBLIC
TESTIMONY
SUPPORT
FOR HB 19**

3/18 @ 1:30pm- Francis Bell from Eagle River. 696-1403

Alaskans complain that Daylight Savings puts us five hours behind the east coast. This autumn just "don't fall back." We will be in the same time zone as Seattle for half the year and only three hours behind the east coast.

Fred Moody - Nome
443 3017
encourage him to
pass HB19
already 3 hrs + ahead
of sun

Christina Apathy

From: lltr@gci.net on behalf of Lori Landstrom [lltr@gci.net]
Sent: Wednesday, March 17, 2010 5:19 PM
To: Sen. Donny Olson; Sen. Joe Thomas; Sen. Hollis French; Sen. Albert Kookesh; Sen. Linda Menard; Senator_Gary_Stevenes@legis.state.ak.us
Subject: HB 19-eliminate DST

Dear Senators,

Please pass this bill out of your committee and keep it moving to passage of the full senate. Daylight Savings Time is a waste of money. It has not been shown to save money, as originally thought. It messes up children and adults sleep schedule twice a year, this is particularly hard on young school age children and the elderly.

Thank you.

Lori Landstrom and Terry Rude
Seward, AK

Christina Apathy

From: chumlee@gci.net on behalf of jim weber [chumlee@gci.net]
Sent: Wednesday, March 17, 2010 5:25 PM
To: Sen. Donny Olson
Subject: HB 19
Attachments: "AVG certification"

Don: please pass HB 19 out of your committee with favorable recommendations of passage. We need HB 19.

Jim Weber
Wasilla

Christina Apathy

From: Lisa Torkelson [lisa@advanced-design.com]
Sent: Wednesday, March 17, 2010 6:35 PM
To: Sen. Donny Olson
Subject: HB 19 support

Honorable Senator Olson,

Thank you for scheduling HB 19, the elimination of Daylight Savings Time. Please support the bill.

I couldn't tell by the bill text which time zone is being proposed, but anything is better than switching twice a year. DST has no relevance to current life except to disrupt routines (and frustrate parents with kids!).

If folks are concerned about being too removed from East Coast, then let's join up with the Pacific coast. When our state experiences sunrises and sunsets all over the clock, eventually few will notice.

Does the Alaskan farmer care whether it's light or dark when he milks his cows? Do Alaskans really save energy with the current system when if the sun sets at 2am instead of 1am? Can anyone tell by the sun what time it is, on any given day, anyway? NO!

If Arizona and Hawaii can do it, then our state can follow their common sense examples. Please support this perpetually introduced bill and get on with life in one zone.

Sincerely,

Lisa

--

Lisa Torkelson
PO Box 670382
Chugiak, AK 99567-0382

Christina Apathy

From: Cindy Hanson [chanson@ahfc.state.ak.us]
Sent: Wednesday, March 17, 2010 5:33 PM
To: Sen. Donny Olson; Sen. Joe Thomas; Sen. Hollis French; Sen. Albert Kookesh; Sen. Linda Menard
Subject: Daylight Savings Time

I would really appreciate Alaska dropping out of the Daylight Savings. I believe it is not necessary anymore.

Thank you,
Cynthia Hanson
Wasilla, AK
907/376-3074

Christina Apathy

From: Rosemary Hanrath [hanrathr@mtaonline.net]
Sent: Wednesday, March 17, 2010 5:48 PM
To: Sen. Donny Olson
Subject: HB 19

Dear Senator: I live too remote to attend the March 18 hearing re: Act to Eliminate Daylight Savings Time. However, I express my sincere desire to see DST eliminated.

In this technical age there is no longer a need to attempt to match Lower 48 times. We are in constant contact via fax, computer, phone and etc.

The twice yearly time change causes Alaska citizens unquestionable upsets. Medical routines including the taking of prescriptive medicines and the sleep patterns disrupt us for many days as we make the re-adjustment spring and fall.

With the many summer hours of daylight the title "Daylight Savings" is laughable if the consequences were not so serious.

As a 43 year resident of this wonderful State, I urge you with the committee to forward HB 19 for Senate vote to delete. Thank you,
Rosemary Hanrath

Christina Apathy

From: Carl Markon [cmarkon@acsalaska.net]
Sent: Wednesday, March 17, 2010 6:02 PM
To: Sen. Donny Olson
Subject: An Act to Eliminate Daylight Saving Time in Alaska

I fully endorse the act to eliminate the daylight saving time in Alaska.

In short, it's just stupid since be the end of the week, it does not make any difference anyway if we are on Alaska Standard Time or Alaska Daylight Time (with is sort of a oxymoron anyway this far north).

Christina Apathy

From: ggage@gci.net on behalf of Glen [ggage@gci.net]
Sent: Wednesday, March 17, 2010 6:30 PM
To: Sen. Donny Olson
Subject: DST is a waste of time

Hi,

I would like to let you know that I do not think Daylight Savings Time does anything to improve the lives of Alaskans!

Because of the daily changes to the length of daylight at our longitude, any differences only effect about 20 days each spring and fall. The downside is that twice a year I have to go through the process of changing each clock in the house. Personally I feel out of sorts each time the time changes, even one hour less sleep can turn a day upside down.

I would ask you to vote to eliminate daylight savings time in Alaska!

Thank you,
Glen Gage
11424 Lower Sunny Cir
Eagle River, AK 99577

Christina Apathy

From: Mario Lanza [doclanza@alyeskafamilymedicine.com]
Sent: Wednesday, March 17, 2010 7:02 PM
To: Sen. Donny Olson; Sen. Joe Thomas; Sen. Hollis French; Sen. Albert Kookesh; Sen. Linda Menard
Attachments: DST.doc

Dear Senators,

Please see the attached document for commentary on Daylight savings time.

Thank you,

Mario A. Lanza, MD, FAAFP
President and Medical Director,
Alyeska Family Medicine, Inc.

To: Members of the Alaska State Legislature

Re: Medical Issues of DST

I hope this brief commentary will aid you in your upcoming decision regarding DST.

I have been a family physician in Anchorage for over 15 years. During that time I have had tens of thousands of patient encounters involving several thousand different people. Both from that experience and from my observations of the Anchorage population in general, I can tell you without hesitation that Seasonal Affective Disorder (SAD) is very real, much more common than reported in the medical literature, and has great effects on our community. Predictably the number of patients I see and treat for depression increases dramatically between the end of September and the end of January. In addition the number of people who complain of various symptoms for which no diagnosis is ever found is much greater in this time frame. Watching the behavior of the population in general also shows me that people just slow down during the winter. The majority of people would not meet the formal criteria for SAD, but their stress level is much higher and their productivity is lower.

My experience and observations also show me that the single most important factor in the causation of SAD is beginning one's day in the dark. The rising sun is a natural cue for humans to end sleep and begin their days. This is why when we use light therapy to treat SAD we recommend that the best time to use the light is first thing in the morning. It should be noted that light therapy has been shown to be the single best therapy for SAD.

Ideally, it would be best if we, for the most part, started our days near or only slightly after dawn, however, it would be very impractical, and in some regions impossible, to manipulate the time in Alaska so that the sun was always up when most people are rising. Because of our extreme northern geography and vast size I will limit the rest of this discussion to central Alaska, because this is where over 75% of the population resides.

The first thing I would like to point out is that central Alaska would naturally be in the same time zone as Hawaii. Therefore, we already push sunrise one hour later than it would otherwise be. This means at the equinox instead of the sun rising at 0600 and setting at 1800, it rises at 0700 and sets at 1900. DST doubles this effect, causing sunrise to be two hours later than it would naturally. So at the equinox the sun does not rise until 0800 and sets at 2000. The combination of these two factors increases by four the number of months people rise and or begin their workday in the dark, two months at the beginning of winter and two at the end of winter. On the other hand if the timing of the onset of DST were adjusted so that the sun never rose later than 0600 (because of DST) it would have little if any bearing on SAD. I must admit in the natural order it does not make much sense for Anchorage to have days at the peak of summer that start at about 0200 and end at 2200. During these very long days having the clock shifted off by two hours makes perfect sense but for the rest of the year this policy wreaks havoc on our bodies' natural clocks.

In summary my recommendation would be to take whatever measures are necessary in order to have as much of the population start their days after sunrise, for as many months of the years as possible. This would mean, as a start, discontinuing DST. It may also mean going back to having Alaska be in more than the current two time zones. Another option would be to shift the whole state to the Hawaii time zone to have the vast majority of the population living on natural time and to lessen the impact on those who live in the far west of the state. In any case it is going to take some seriously out of the box thinking to solve this dilemma. Alaska is unique in so many other ways why should our time keeping be any different. I encourage you all to be bold and think so far outside the box that no one can even see the box anymore.

Sincerely,

Mario A. Lanza, MD, FAAFP
President and Medical Director,
Alyeska Family Medicine, Inc.

Christina Apathy

From: Jerri Sansone [tj_sansone@yahoo.com]
Sent: Wednesday, March 17, 2010 7:10 PM
To: Sen. Donny Olson
Subject: day light savings time

please vote for the removal of day light savings time from Alaska; it is no longer needed due to the updates in technology. thank you.

Jerri Sansone
338-5306

Christina Apathy

From: Steve Adams [smokey@mosquitonet.com]
Sent: Wednesday, March 17, 2010 7:22 PM
To: Sen. Donny Olson
Subject: Daylight Saving Time

Senator:

Please do everything in your power to end this madness known as Daylight Saving Time in Alaska !

Thank You.

Steve Adams

Christina Apathy

From: Duffield [ryduffield@gmail.com]
Sent: Wednesday, March 17, 2010 7:27 PM
To: Sen. Donny Olson
Subject: Daylight Saving Time

Dear Senator Olson,

I understand Daylight Saving Time is to be on the Thursday agenda and I'd like to voice my opinion on the subject please.

I am totally opposed to DST and have been for 50+ years. In my nearly 70 years of life I have never yet met a person who was not opposed to it. It is truly an exercise in stupidity that only seems to enjoy support by the business community. I contend that the business community can fend for itself and adjust their business hours on an individual basis to suit their inter-state needs without affecting the general population of the state. I have 40+ timepieces of varying types that have to be reset twice annually for this nonsense and there is absolutely no benefit from it, whatever. There are some contested studies that show some minute fuel savings but everyone has some study to support any position. It does not mean it is valid though. Arizona and Hawaii, at least, have done just fine for years letting the stupid people around them changing their clocks twice a year and they survive, very well. Alaska has 4 "real" time zones which we combined into 2 many years ago and we have survived the trauma. Surely we can spare us all a whole lot of inconvenience and endure the temporary trauma of disassociating ourselves from this national nonsense. As I say, if businesses find it inconvenient, then they can simply adjust the work hours of selected employees to take care of their inter-state needs. I seriously doubt the state of Alaska has more inter-state business than the state of Hawaii with their volume of tourism, yet they thrive. And they are even more impacted than most of the Alaskan population..

I will share this same message with all members of the Senate Community and Regional Affairs Committee.

Please work to rid Alaska of this nonsense. If you succeed your efforts will be appreciated for generations to come.

Thank you,

Robert Duffield
P.O. Box 55901
3039 Hurst Road
North Pole, AK 99705
Tel: 907-488-3824
Email: ryduffield@gmail.com

--
Sent from my PC

Christina Apathy

From: LLKILE@aol.com
Sent: Wednesday, March 17, 2010 7:36 PM
To: Sen. Donny Olson
Subject: daylight savings time

It would be nice to know that we can do something simple before we tackle the tough task like the gas pipeline! Please, do something simple ... get rid of daylight savings time! All around the water cooler the past three days, everyone has been griping about this topic and it is unanimous that we don't care for it. Except for a few businesses that do business on the East Coast, daylight savings does not do a lot for Alaskans. We finally get to wake up to sunlight (after a long winter) and daylight savings puts us back into the morning dark! Depressing Then we add daylight to the evening and go back to sleep in the daylight? It is much nicer to drive to work in the daylight than it is to get another hour of it at night and my dog does not care!

Thank you

Christina Apathy

From: Buessler_Joe [Buessler_Joe@asdk12.org]
Sent: Wednesday, March 17, 2010 7:42 PM
To: Sen. Donny Olson

Please dump Daylight savings time. Please.

Joe

Christina Apathy

From: Beth Jacobs [mukluktok@gmail.com]
Sent: Wednesday, March 17, 2010 7:48 PM
To: Sen. Donny Olson
Subject: Daylight Savings time

Oh, we would be so happy to have daylight savings time eliminated.
Twice a year it is such a hassle for people for church and work and there are no benefits for us Alaskans.

Thanks so much,
Beth and George Jacobs, Mukluk News, Tok

Christina Apathy

From: phyllis haggland [phaggland@yahoo.com]
Sent: Wednesday, March 17, 2010 8:06 PM
To: Sen. Donny Olson
Subject: Daylight Savings Time

Please eliminate Daylight Savings Time in Ak. It's costly and useless. Thank you. Phyllis Haggland

Christina Apathy

From: Darell Tweet [dtweet@gmail.com]
Sent: Wednesday, March 17, 2010 8:07 PM
To: Sen. Donny Olson
Subject: House Bill 19

Hi Senator,

Just writing to voice my strong support for HB 19, the bill to eliminate daily savings time. Day light savings just doesn't make sense for Alaska!

Proud constituent,

Darell Tweet

Christina Apathy

From: Ray [rayban@gci.net]
Sent: Wednesday, March 17, 2010 8:11 PM
To: "Undisclosed-Recipient:;>"@NONE
Subject: Fw: House Bill 19

> Sen. Olson, Sen. Thomas, Sen. French, Sen. Kookesh and Sen. Menard:
>
> I support House Bill 19 strongly as I am extremely opposed to Daylight
> Savings Time. It is very disruptive to my family in many ways.
>
> 1) It's dangerous for my children: My sons are forced to ride the bus
> in the dark for an extra month with bus drivers who are forced to
> drive in the dark on icy roads. Then they are forced to wait at the
> bus stop in the dark with moose lurking and other commuters who may
> not see them by the side of the road.
> 2) It's dangerous for me: I and every other commuter on the road
> before 7am am forced to drive longer in the dark thus increasing the
> potential for accidents and moose collisions.
> 3) My wife's family in Nome say that it throws their internal clocks
> off - just when they are finally getting some sun.
>
> In summary, I see no benefit for Alaskans from Daylight Savings Time
> and only added disruption and risk. I urge you to pass HB19 from your
> committee and allow a full vote of the Senate. Thank you for your time
> and for listening to my concerns about the welfare of my family. -
> Ralph Bendixen, Senate District 6, House District 16

Christina Apathy

From: dww@acsalaska.net
Sent: Wednesday, March 17, 2010 8:13 PM
To: Sen. Donny Olson
Subject: HB 19

Senator Olson:

I support HB 19 - An Act to Eliminate Daylight Saving Time in Alaska.

David Wiswar
11309 Coppet Street
Fairbanks, AK 99709
907.457. 2344

Christina Apathy

From: Loretta Mattson [goldie@ptialaska.net]
Sent: Wednesday, March 17, 2010 9:11 PM
To: Sen. Donny Olson
Subject: Eliminate Daylight Savings time

I hope you can get this off our backs.
Loretta Mattson
Kasilof, AK

Christina Apathy

From: Paula & Robert Caywood [cmmgen@mtaonline.net]
Sent: Wednesday, March 17, 2010 9:16 PM
To: Sen. Donny Olson; Sen. Joe Thomas; Sen. Hollis French; Sen. Albert Kookesh; Sen. Linda Menard
Subject: HB 19 - An Act to Eliminate Daylight Saving Time in Alaska

To Whom It May Concern:

We support this bill. Alaska does not benefit in energy savings from daylight savings. The changing of the clocks is hard on children having to adjust their schedules. The problems that would arise from not being on the same time as most of the other states would be minimal as other states have already eliminated daylight savings without problems.

Paula & Robert Caywood
P.O. Box 774042
Eagle River, AK 99577
907-694-8758

_____ Information from ESET Smart Security, version of virus signature database 4953 (20100317)

The message was checked by ESET Smart Security.

<http://www.eset.com>

Christina Apathy

From: jay [jaynolfi@mtaonline.net]
Sent: Wednesday, March 17, 2010 10:13 PM
To: Sen. Donny Olson
Subject: HB 19

Senator Linda, please have staff get a copy of the email to the remaining members of your committee. I am having trouble getting it to them.

I support the elimination of Daylight Saving Time in Alaska for all the right reasons and especially because as an 87-year old lady I feel like I am being robbed of an hour of my life time each year I am compelled to turn the clock ahead.

Seriously, in Alaska, playing this game is nonsense.

I urge you to please concur with the HB.

Jay Nolfi
907-892-6356
jaynolfi@mtaonline.net

Christina Apathy

From: seinfeld@gci.net on behalf of Jim Adams [seinfeld@gci.net]
Sent: Wednesday, March 17, 2010 10:29 PM
To: Sen. Donny Olson
Cc: neal_foster@legislature.state.ak.us
Subject: hb-19 daylight savings time

Good evening Sen. Olson,
You probably heard the NOME boys came in second in a hard fought battle for the 3A State Basketball championship; losing by one point at the buzzer.
Next time!

I am hoping you will support the end of Daylite Savings time in Alaska. It's already started: "March Madness!"

In summer up here, Daylite Savings does not make any sense as it's daylight practically all 24 hours. Let's get back to "body clock" time which is more in tune with actual sunrise and sunset.

Opponents say "we will fall further behind! " With today's technology, anyone can keep up with anything they want going on down south. Are we in that big of a rush to go "somewhere"? If someone wants to keep up with what's going on in New York, they can move there; but they won't because even they will admit things are in too much of a rush down there. That's probably part of why they moved up here.

Thank you for your support to end Daylite savings time.

Christina Apathy

From: Elizabeth Wood [ewood@mosquionet.com]
Sent: Wednesday, March 17, 2010 10:49 PM
To: Sen. Donny Olson; Sen. Joe Thomas; Sen. Hollis French; Sen. Albert Kookesh; Sen. Linda Menard
Cc: Rep. Anna Fairclough
Subject: HB 19 ending daylight savings time in Alaska

I FULLY support eliminating the daylight savings time process in the state of Alaska.
Elizabeth Wood

Christina Apathy

From: flashlightman@gci.net on behalf of flashlightman [flashlightman@gci.net]
Sent: Wednesday, March 17, 2010 10:52 PM
To: Sen. Donny Olson
Subject: Daylight Savings

Dear Senator,

The wife and I would like to eliminate the daylight savings in Alaska, seeing this is still in the winter time when the change is done and we can see no real benefit, except maybe trying to keep in touch with the East coast for an extra hour from 12-5 their time(for business'). I still see children walking in the dark on their way to school, keep the extra light in the morning, safer trips to work, safer children walking that are more obvious, no more running around changing clocks and no more waking up an hour earlier. Alaskans don't need the change, there is no real reason for it.

Thank you.

Gerritt K. Waterlander
Eagle River, Alaska

Christina Apathy

From: starlightak@gci.net on behalf of Stella Huffer [starlightak@gci.net]
Sent: Wednesday, March 17, 2010 10:56 PM
To: Sen. Donny Olson
Subject: Elimination of Daylight Savings Time
Attachments: image001.gif

I am writing in support of the elimination of Daylight Savings Time. I've read literature on the subject and believe that, for Alaska, the change is unnecessary. With our long, extended days in the summer, I don't believe we need the change to benefit our lifestyles. It creates chaos with children as well as some adults who have a difficult time with the change. If there were a economical benefit for DST, I could understand it but not in Alaska. We're blessed with our long, light-filled days.

Sincerely,

Stella Huffer
Eagle River, Alaska

Christina Apathy

From: BNeagle2@aol.com
Sent: Wednesday, March 17, 2010 11:19 PM
To: Sen. Donny Olson
Subject: support HB 19 to eliminate DST in Alaska

Dear Senator Olson,

I am writing to urge you to support HB 19 to Eliminate Daylight Savings Time in Alaska. Going to DST serves no practical purpose for Alaska, and only creates unnecessary hassles twice a year. A friend summed it up well following the time change, telling people, "You didn't lose an hour, the government took it from you. It will be given back to you in the fall, but you will not accrue any interest." I believe that it is just added government tampering with our lives here in Alaska, and we should just not participate any longer. The original ideas for implementing DST are no longer relevant, and businesses are quite adept at dealing across multiple time zones with all the world markets. Arizona and Indiana seem to succeed just fine not participating in DST, Alaska should as well.

Please consider supporting HB 19, I do not know of a single friend here in Fairbanks that is in favor of DST - it is just irrelevant for us. Now is the time to move this bill forward.

Sincerely,
Brett Nelson

2425 Nugget Loop
Fairbanks, AK 99709
455-4075

Christina Apathy

From: beeman@gci.net on behalf of Tom Elliott [beeman@gci.net]
Sent: Wednesday, March 17, 2010 11:28 PM
To: Sen. Donny Olson
Subject: Daylight Saving Time

Dear Senator,

Alaskans have spoken repeatedly expressing, via various polls, the view that Daylight Savings Time is unneeded in this State. I believe, further, that it is simply foolishness carried on for reasons that fall apart under objective examination.

Tom Elliott
P.O. Box 672547
Chugiak, Alaska 99567

Christina Apathy

From: mixfam@gci.net on behalf of Teresa Miksch [mixfam@gci.net]
Sent: Thursday, March 18, 2010 5:48 AM
To: Sen. Donny Olson
Subject: Daylight Savings Time

Please change the rules so that Alaska stays on normal time. We don't need DST. No one I talk to wants it. This has been an ongoing discussion the for 25+ years that I've lived here.

If it wasn't an issue, it wouldn't come up so often.

This is silly and a waste of voter's money to not just vote to eliminate it and be done with it.

Thanks for listening.

Teresa Miksch
Eagle River, AK

Christina Apathy

From: Swan, Glenn E. [SwanGE@ci.anchorage.ak.us]
Sent: Thursday, March 18, 2010 6:50 AM
To: Sen. Joe Thomas; Sen. Donny Olson
Cc: Sen. Hollis French; Sen. Albert Kookesh; Sen. Linda Menard
Subject: HB-19

Today the Senate Community & Regional Affairs Committee will be hearing HB 19 – An Act to Eliminate Daylight Saving Time in Alaska. I say its about time we did away with an antiquated time change that does nothing for the citizens of Alaska. I support this bill and hope that you will pass it.

Thank-you

Glenn Swan

16811 mercy Eagle River
Alaska 99577
694-8747

Christina Apathy

From: PATRICK KUKOWSKI [tbirdskis@gci.net]
Sent: Thursday, March 18, 2010 7:18 AM
To: Sen. Donny Olson
Subject: hb19

My family and I support HB19. Thank you for your service. patrick kukowski

Christina Apathy

From: Marty, Roger [roger.marty@shawgrp.com]
Sent: Thursday, March 18, 2010 7:29 AM
To: Sen. Donny Olson
Subject: Daylight Saving Time . . .
Attachments: image001.gif

Honorable Senator Donald Olson,

I am most pleased to see Alaska is moving towards the abolishment of daylight savings time.

I am a thirty five year Fairbanks resident and work at Fort Wainwright. The company I work for is based in Baton Rouge, LA and along the east coast. Everyone I must work with on a daily basis is at least three hours ahead of us and in many cases four hours. This means I must start very early each day so I can deal with corporate business before those offices close at 11:00 A.M. Fairbanks time.

In essence deleting daylight savings time will effectively add an extremely productive hour to my work day.

I cannot believe that all Alaskan businesses do not feel the same as we all must deal with the east coast in some form or other.

Thank you for taking time to read my message and tackling a long needed change in the 50th State.

God Bless and God Speed

R.M. Marty
Project Manager
Shaw Infrastructure, Inc.
Shaw Environmental & Infrastructure Group
P.O. Box 35262
Fort Wainwright, AK 99703
907.361.7001 direct
907.687.2388 cell
907.361.6834 fax
roger.marty@shawgrp.com

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<http://www.shawgrp.com>

Christina Apathy

From: Jeff and Pam Schmitz [jschmitz@alaska.net]
Sent: Thursday, March 18, 2010 7:37 AM
To: Sen. Donny Olson; Sen. Kevin Meyer; Rep. Chris Tuck; Sen. Joe Thomas; Sen. Hollis French; Sen. Albert Kookesh; Sen. Linda Menard; Rep. Anna Fairclough
Subject: Hearing on HB 19

Anna,

Thank you so much for this timely email. I appreciate the opportunity to respond and give my input to the process.

Gentlemen of the committee,

Please pass HB 19 out of committee - we will be doing Alaskans a massive favor by eliminating this dinosaur. None of the arguments for it hold water. There are no quantifiable energy savings or anything else that can be concretely shown to be of benefit. Rather, there **ARE** a host of problems that DST generates - tons of non patched business computers to change, countless clocks, thermostats, car radios, etc. Then there are the definable downsides - more accidents in the morning hours, sunlight in the eyes of E -W commuters four times a year vice two, cycling commuters that lose a week of safer commuting each spring, folks late for work, shift scheduling problems and readjusting to the other areas of the country/world that do (or do not) change. Arizona is a sterling example of a mainstream, high population, business centric state that does not mess with this concept. It works well for them.

Sorry this is short but I lost an hour this last Sunday.....Still trying to make it up!!

Bottom line: Ditch DST

Thanks,

Jeff Schmitz
911 Fairwood Drive
Anchorage 99518

Christina Apathy

From: Candace Hiner [chiner@ahfc.state.ak.us]
Sent: Thursday, March 18, 2010 7:53 AM
To: Sen. Donny Olson
Subject: Please help us eliminate daylight savings in AK
Attachments: image001.jpg; image004.jpg

I'm in favor of eliminating daylight savings in Alaska

Candace J. Hiner

Alaska Housing Finance Corporation
Information Systems, Operations Manager
(907) 330-8351 voice (907) 338-5476 fax



Christina Apathy

From: C M Tyler [tylercm@gmail.com]
Sent: Thursday, March 18, 2010 8:05 AM
To: Sen. Donny Olson
Subject: Pass HB 19 please

Pass HB 19 please

Please for the sake of the health of the school children pass HB 19. The fact that we all suffer time changes for the apparent reason that it is easier for some businesses to be in the time zone of the lower 48 is a crime. If they want to be in that time zone let them go there. I rather like the idea of "We don't give a damn how they do it outside".

Thank you for considering this matter.

Sincerely

Carol Tyler

Big Lake Alaska

tylercm@gmail.com

Christina Apathy

From: Heidi [boreallodge@juno.com]
Sent: Thursday, March 18, 2010 2:46 PM
To: Sen. Donny Olson; Sen. Joe Thomas; Sen. Hollis French; Sen. Albert Kookesh; Sen. Linda Menard
Subject: Hearing on HB 19 – An Act to Eliminate Daylight Saving Time

Dear Representatives;

If it is not too late -

I am supportive of eliminating Daylight savings time in Alaska.

I never have known why we honor this custom in the land of the midnight sun!? - I have always hated the change each spring.

I find it a disruptive annoyance to daily routine each spring, and am always relieved in the fall when we change back to standard time :)

Also I take volunteer weather readings for NOAA, which all have to be observed and recorded in standard time, so it is always a little confusing to remember to take scheduled readings an hour later than my clock reads each day.

I for one support eliminating daylight savings :)

Thanks!

Heidi Schoppenhorst

Scott & Heidi Schoppenhorst

Boreal Lodging

Boreal Coffee & Gifts

#1 Timberwolf Trail

Wiseman Village, AK 99790

PH/FAX: 907-678-4566

boreallodge@Juno.com

www.boreallodge.com

[Diet Help](#)

[Cheap Diet Help Tips. Click here.](#)

Christina Apathy

From: nick danger [pack122@msn.com]
Sent: Thursday, March 18, 2010 2:54 PM
To: Sen. Donny Olson; Sen. Joe Thomas; Sen. Hollis French; Sen. Albert Kookesh; Sen. Linda Menard
Subject: HB19

please pass HB19, we alaskans are sick of daylight savings time, we dont want it , we dont need it, it doesnt help us at all.....please please please get rid of it...
Thanks

The New Busy is not the old busy. Search, chat and e-mail from your inbox. [Get started.](#)

Christina Apathy

From: David Baldwin [djbaldwin@mac.com]
Sent: Thursday, March 18, 2010 1:55 PM
To: Sen. Donny Olson
Subject: Eliminate Daylight Savings

I support eliminating daylight Savings.

Dave Baldwin

Sent from my iPhone

Christina Apathy

From: Angel Ortiz [a1ortiz15@gmail.com]
Sent: Thursday, March 18, 2010 12:51 PM
To: Sen. Donny Olson
Subject: HB 19

Dear Senator:

I believe that the time change for Alaska is not necessary at all. With e-mail and 24/7 means of communication available to us, buseness with the lower 48 is easy. We get plenty of light here in the summer too.

Thanks for your work.

--

Angel L. Ortiz-Sierra
19501 N. Mitkof Lp
Eagle River, AK 99577
907-694-7111 home
907-742-7010 work

4821
907/ 465 - ~~4281~~

COMMITTEE ON REGIONAL AFFAIRS

REGARDING HB-19

FROM WALT SOWEN, BOX 107, SELDOWA, AK 99663
907/ 234-8790

I FULLY SUPPORT THE ELIMINATION OF DAYLIGHT SAVING'S TIME IN ALASKA, SOUTHCENTRAL ALASKA, THE MAJORITY POPULATION CENTER, IS ESSENTIALLY ON DAYLIGHT SAVING'S TIME ALL WINTER. STARTING NOW UNTIL LATE IN THE YEAR, NOON HERE OCCURS AT ABOUT 2 PM. ANOTHER ARGUMENT WHICH MAY HAVE RESONANCE AMONG THE BUSINESS COMMUNITY WHICH SOUTHEAST AK USED SUCCESSFULLY FOR YEARS PRIOR TO THE SHEFFIELD ADMINISTRATION IS THAT, SHOULD WE DO AWAY WITH DAYLIGHT SAVING'S, ALASKA'S CLOCKS WOULD BE IN SYNC WITH PACIFIC TIME FOR MORE THAN $\frac{1}{2}$ OF THE YEAR. WE HAVE PLENTY OF SUNSHINE IN THE SUMMER, PLEASE GET OUR CLOCKS MORE NEARLY IN SYNC WITH THE SUN.

THANKS, *Walt Sowan*

Christina Apathy

From: Watson, Sylvia E (GOV) [sylvia.watson@alaska.gov]
Sent: Friday, March 19, 2010 7:27 AM
To: Sen. Donny Olson
Subject: Hearing on HB 19 - An Act to Eliminate Daylight Saving Time in Alaska

I so wish they would pick one time and call it good, this switching is not good for my little bitty mind.

Sylvia Watson

***Administrative Support Specialist
Office of Governor Sean Parnell
Division of Administrative Services
240 Main Street Ste 301
Juneau, AK 99801***

***Phone: (907) 465-3870
Fax: (907) 465-2211***

***sylvia.watson@alaska.gov
<http://gov.state.ak.us>***

Christina Apathy

From: James Bethany [jamesleebethany@gmail.com]
Sent: Friday, March 19, 2010 10:49 AM
To: Sen. Donny Olson
Subject: HB - 19 Daylight Savings Time

To: Senator Donald Olson
From: James Bethany (Alaskan since circa 1990)
Date: March 19, 2010
Subject: HB 19 – An Act to Eliminate Daylight Savings Time in Alaska

Dear Senator Donald Olson,

My name is James Bethany and I am writing you to let you know that I fully support HB 19. I would like to see this act approved not only in the lower House of the Alaska Legislature, but also within the upper Senate within the Alaska Legislature, and signed into law by Governor Parnell this Legislative session. Let's work together to do away with Daylight Savings Time here in the greatest state, of Alaska.

The argument from those within the business community that by doing away with daylight savings time, will somehow put such establishments at a competitive disadvantage, is simply a fallacy. If this were the case, then Arizona (which as you know is a state that does not adhere to daylight savings) would have discontinued the practice of not setting time pieces in accordance to daylight savings each Spring season. Additionally, I am disturbed by those who argue for daylight savings time here in Alaska. I find it a little offensive that those same people seem to think it's okay for our fellow Alaskans who live out along the Aleutian Islands or St. Lawrence Island to live under a separate time zone, Hawaiian time zone, which is an hour behind the rest of Alaska and Alaska Time Zone. Why is it acceptable for our fellow Alaskans who live along the Aleutian Islands and St. Lawrence Island to be segregated, to be put in a totally different time zone (Hawaiian Time Zone), but not acceptable for the rest of Alaska to join them and live under a single unified time zone? Let's work together to enact this act to do away with Daylight Savings Time here in Alaska and bring all Alaskans under a single unified time zone. The argument that by Alaskans not adhering to Daylight Savings Time, will somehow put Alaskans at a disadvantage with regard to news and information, is simply a fallacy, especially in this age of 24 cable hour news, radio, and immediate news postings via the internet. With regard to the latter, I immediately posted news of the Haiti and Chile earthquakes as soon as I saw mention of the events on BBC's website. I then immediately began posting this news on my social networking sites, as well as, twitter to warn people living along shorelines about the potential of a tsunami approaching.

Finally, thank you for taking the time to read my thoughts on HB 19 and I hope you will join me in working to do away with Daylight Savings Time here in Alaska, in order to bring ALL Alaskans together within a unified time zone.

Regards,

James Bethany
jamesleebethany@gmail.com
Anchorage, AK

Christina Apathy

From: Jeff [jwsperry@gci.net]
Sent: Friday, March 19, 2010 2:29 PM
To: Sen. Donny Olson; Sen. Albert Kookesh; Sen. Hollis French; Sen. Joe Thomas
Subject: hb19

Senators: I just received a notice today of a hearing about HB19 that was held yesterday. Unfortunately since the time of the hearing has already passed I was unable to teleconference in to the hearing.

I would like to express my support for HB19 and to say that I am very much in favor of eliminating daylight savings time in Alaska. With all of the daylight that we have from March to September it does not appear to me that we need to participate in the changing of the clocks

Please support this bill and pass it this year.

thank you very much

Jeff Sperry

17151 Vanover Circle

Eagle River, Ak

99577

Christina Apathy

From: Brooks and Diane [northernludwig5@acsalaska.net]
Sent: Sunday, March 21, 2010 3:44 PM
To: Sen. Donny Olson
Subject: HB 19 Repeal Daylight Savings Time

Dear Senator Olson,

Please vote to repeal daylight savings time(HB 19). Our family has a difficult time adjusting twice a year to the time change. This time of year it makes it twice as hard to get the kids to bed at 8:00pm and takes us six weeks to get back on track. Keep life simple. Ax daylight savings time in Alaska. If Juneau needs to be on daylight savings time to connect with Seattle then incorporate Juneau but please don't penalize the rest of us.

Sincerely,

Brooks, Diane, Fin, Eli, and Ian Ludwig
3530 Starship Lane
Fairbanks, Alaska

Christina Apathy

From: Joanne Frey [alaskalighthousecottage@gmail.com]
Sent: Saturday, March 20, 2010 1:13 PM
To: Sen. Donny Olson
Subject: daylight savings time

Please consider eliminating daylight savings time in Alaska. I am a teacher and it is very disruptive to the students and it leaves students in the dark that much longer after the long dark winter. You can see the grumpiness in all of the students when the change occurs and it takes at least a week for the adjustment to happen. Just when the hope of sun is beginning to set in, it is dark in the morning again.

I also do business here and with the lower 48 and I do not find that the time we lose for business contact is significant.

Thank You for Your Consideration,

Joanne Frey
311 third Ave.
Seward, AK 99664

Christina Apathy

From: Carpende Thomas [carp@me.com]
Sent: Saturday, March 20, 2010 9:21 AM
To: Sen. Donny Olson
Subject: HB 19 Eliminate daylight saving in Alaska

Dear Senator Olson,

I was one of the people that testified at the COMMUNITY & REGIONAL AFFAIRS hearing on Thursday 3/18/10. I was however was disappointed to see that the only thing accomplished was a "Heard & Held." We as citizens took time out of our busy days to attend the hearing and I think you owe us more than "Heard & Held." When are you going to move on this issue? It was plain to me that there is a majority of my fellow Alaskans feel as I do that we should eliminate daylight saving in Alaska. We have waited long enough for this so I would appreciate it if you would get with your fellow CRA members and vote to send HB 19 on to Labor and Commerce.

Thank you for taking time to read my message and for your service to our state.

Thomas Carpende
401 Beaver Blvd
North Pole AK 99705-7649
907 488 2888

Christina Apathy

From: harold parker [dippercreek@hotmail.com]
Sent: Friday, March 19, 2010 6:15 PM
To: Sen. Donny Olson
Subject: Daylight saving

Ms. Fairclough,

Thanks so much for sending this info to me, on HB19. We returned from the 'bush' after the time mentioned. But do want to encourage any move to eliminate daylight saving time for Alaska - lets do it!

If some businesses really have a hard time coordinating with contacts 'outside' in other time zones, they can start work an hour earlier, not make the rest of us do so...No good real reason to have it; good reasons not to have it. Putting the whole population 2 hours off sun time for 6-7 months a year is not only silly, but also stresses many normal persons' sleep-wake cycles, sends thousands of kids to school in the dark for 2-3 extra months... Harold Parker, Chugiak, Ak.

Christina Apathy

From: Dick Gunlogson [dickgun@mtaonline.net]
Sent: Monday, March 22, 2010 10:56 AM
To: Sen. Donny Olson

Dear Senator Olson,

I am FWD to you my comments written to Senator Anna Fairclough regarding the bill to change DST in Alaska.

I urge you to consider and pass this bill out of your Committee quickly so it can continue toward final passage this session.

Sincerely,

Dick Gunlogson
Willow

Christina Apathy

From: Dick Gunlogson [dickgun@mtaonline.net]
Sent: Monday, March 22, 2010 11:06 AM
To: Sen. Donny Olson
Subject: Fwd:

Begin forwarded message:

From: Dick Gunlogson <dickgun@mtaonline.net>
Date: March 17, 2010 8:21:00 PM ADT
To: Senator_Linda_Menard@legis.state.ak.us
Subject:

Dear Senator Menard,

I am please to see that there is still life in the interest to change how DST affects our lives. I am strongly opposed to our current situation concerning DST. Strangely, or perhaps not so strangely, considering how long ago it happened, a very large number of people now in Alaska do not know that, unless you live in SE Alaska which is properly in the Yukon Standard Time Zone, we live on one hour of DST the year around. Three fourths or more of the State of Alaska does not lie in Yukon Standard Time. Most of it is in the Alaska Standard Time Zone and another part is far enough WEST to be in the Bering Sea Time Zone. Why should nearly all of Alaska be forced into the Yukon Time Zone merely because the Capitol is in Juneau and the small percentage of people who live there, mostly State Government employees, do not want to be inconvenienced by on Alaska Standard Time. (Another reason to move the Capitol?)

For over forty years I operated my Hunting Lodge on the Alaska Peninsula between Port Moller and Cold Bay, on the Bering Sea side. In that area, being in the Bering Sea Time Zone, we were three hours out of phase with the sun and the dictates of State of Alaska time. While that did not really affect our actual hunting operations, because we ignored it, it did affect every relationship we had with the 'main stream.' Which was airline schedules, work schedules of people we needed because of our business - F&W Service in CBY, state employees in CBY, fuel service and on.

I was just beginning to rejoice in the fact that, in spite of being on the year around DST of one hour, it was getting daylight on a clear sky about 7am, when BOOM! Double DST ensued. Now we are back in morning darkness for another month to make up for that hour. This is not good for schools nor for the children who are forced to continue to be up in the dark. In fact DST forces our schools and children to be in the dark in way too much of spring and fall. Do we really need even one hour, much less two, of DST in Alaska? Arizona has been fine without it as have other places in the US. Not many of us play golf in the late afternoon at this time of year nor do anywhere near a majority of us need to be on the phone to the Wall Street big wigs at closer to NYC time. If it is that important to have daylight in the afternoon for a few businesses let them adjust their work day to accommodate their wishes. I firmly believe that, given the chance, a large majority of Alaskans would vote to do away with at least the second hour of DST if not vote to return to Standard Alaska Time.

I suppose this is not a 'big deal' in the political arena of the Legislature but it is at least as important to consider as the Marmot!

Sincerely,

Dick Gunlogson
Willow, Alaska

Community and Regional Affairs Standing Committee

Written testimony in regard to HB19, Elimination of Daylight Savings, sponsored by Anna Fairclough.

Submitted on March 17, 2010 by
Sandra Matthews
P. O. box 265
Kasilof AK 99610

My husband and I are supporters of HB19, The Elimination of Daylight Savings. Twice every year we have to go through the process of changing the time on 15 or 16 clocks and forcing our bodies to make a sudden adjustment to a new schedule. The time change in the spring is the worst of the two and takes at least several days to adjust to.

A state at our latitude does not gain anything by implementing daylight savings time. We have eighteen to twenty hours of daylight in the summer and eighteen to twenty hours of darkness in the winter. How does shifting time back and forth one hour twice a year change that?

The argument made by the business community that it is easier to make business calls to other states when we are using daylight savings is weak. With computers, fax machines, text messages, e-mails, and cell phones, we already conduct interstate communication around the clock. Now that we are involved in a global economy that same technology helps us get past those worldwide time conflicts.

In my opinion implementing daylight savings is of no use and it should be eliminated.

Christina Apathy

From: Wedin John [john@eye-cue.com]
Sent: Monday, March 22, 2010 7:34 PM
To: Sen. Donny Olson
Subject: At the end of the day...

Senator Olson,

I'm sure you have more important issues on your plate right now, but honestly, this is an EASY one. Sunset tonight in Anchorage is AFTER 10 PM! Can you really believe that Alaskans need to SAVE DAYLIGHT? Meanwhile, sunrise is at 7:40 a.m. If we did not observe DST, it would be at 6:40 a.m. and that WOULD save daylight, energy and time when Alaskans can really use it. There are DOZENS of reasons to repeal our ridiculous adherence to DST, but really...all you have to do is talk to your constituents. See if you can find ONE in ten of them that likes DST.

Please at least make this part of the conversation in your committee. It really shouldn't take more than a half hour to make a decision to do the right thing, and that - obviously - is repeal DST.

John Wedin

[Following is an email I sent you on 3/18. No response to this to date. Please let me know if you need further information on why we should abolish DST]

Dear Senator Olson,

Among all the controversial issues, heated debates, divisive controversies and ponderous dilemmas the legislature faces in 2010, the abolition of DST (HB-19) is a no-brainer. No matter what else does - or doesn't - get accomplished in Juneau this year, if this legislature can abolish DST in Alaska, it will have one bright, shining and positive achievement.

Starting with professional associates and clients, I have informally polled more than 200 Alaskans over the past three years regarding DST, and I can count the supporters of this absurd practice on one hand (LESS THAN 2%). In other words, 98% of the Alaskans I have spoken with are in favor of abolishing DST in Alaska.

*This - to varying degrees - is the Land of the Midnight Sun. We DO NOT save daylight in Alaska when we go through the arduous hoops of turning millions of clocks forward - and back - twice every year. In fact, we expend more energy (natural gas, electricity, etc.) when we implement DST.

*Hawaii and Arizona DO NOT practice DST. Both states decided it did not make a significant difference in their states, and they abolished the practice. IT MAKES EVEN LESS SENSE IN ALASKA.

*We are not sheep, nor a "me too" state that blindly follows what other states do. ARE WE??? DST makes sense in Washington, Idaho, Oregon, Michigan, Illinois, New York, Maine, and a dozen other northern tier states. IT DOES NOT MAKE SENSE IN ALASKA! None. Whatsoever.

*You will find a small hand full of DST supporters...most of them are professional folks who work with east coast enterprises. I am among them. I have clients and associates on the East Coast and northern tier states who practice DST. However, the impact of NOT following their lead on DST poses a very small inconvenience to

my business. And, compared to total nonsense and inconvenience of DST here locally, this is really a non-factor.

Please "see the light" here and do the right thing for you, your constituents and most every Alaskan who calls the Last Frontier home.

Sincerely,

John Wedin

john@eye-cue.com
907-248-7663

Christina Apathy

From: vada moore [vada@alaska.net]
Sent: Monday, March 22, 2010 6:17 PM
To: Sen. Donny Olson; Sen. Joe Thomas; Sen. Hollis French; Sen. Albert Kookesh; Sen. Linda Menard
Subject: Fw: Daylight Savings Time

Do hope your committees will be able to abolish Daylight Savings for Alaska. Thank you Vada L Moore
----- Original Message -----

From: Rep. Anna Fairclough
To: vada moore
Sent: Sunday, March 21, 2010 3:52 PM
Subject: RE: Daylight Savings Time

Vada,

The bill passed the House of Representatives last session. We are currently in the Senates Community and Regional Affairs; the bill was heard and held last Thursday because of a lack of a quorum. If you support the bill (the repeal of DST) you may want to send an email to the Committee Members. The bill will still need to be heard in the Senate Labor and Commerce Committee, then Senate Finance. I have listed below the members of the Senate's Community and Regional Affairs Committee.

Thank you for your support.

Anna

Senate Community and Regional Affairs Committee

>Chair - Senator Donald Olson
><mailto:Senator_Donald_Olson@legis.state.ak.us>Senator_Donald_Olson@leg
>is.state.ak.us

> 907-465-3707

>
>Vice Chair - Senator Joe Thomas
><mailto:Senator_Joe_Thomas@legis.state.ak.us>Senator_Joe_Thomas@legis.s
>tate.ak.us

>
>
> 907-465-2327

>Member - Senator Hollis French
><mailto:Senator_Hollis_French@legis.state.ak.us>Senator_Hollis_French@l
>egis.state.ak.us

>
>
> 907-465-3892

>Member - Senator Albert Kookesh
><mailto:Senator_Albert_Kookesh@legis.state.ak.us>Senator_Albert_Kookesh
>@legis.state.ak.us

>
>

> 907-465-3473
>
>Member - Senator Linda Menard
><[mailto:Senator Linda Menard@legis.state.ak.us](mailto:Senator_Linda_Menard@legis.state.ak.us)>Senator_Linda_Menard@leg
>is.state.ak.us
>
>
> 907-465-6600
>

From: vada moore [<mailto:vada@alaska.net>]
Sent: Sunday, March 21, 2010 3:40 PM
To: Rep. Anna Fairclough
Subject: Daylight Savings Time

Was very pleased yo hear you were introducing a bill to get rid of Daylight Savings Time. It has always been such a joke for us here in Alaska. Hope you succeed. Vada L Moore

Christina Apathy

From: germini@acsalaska.net
Sent: Tuesday, March 23, 2010 9:05 AM
To: Sen. Donny Olson
Cc: Sen. Hollis French; Sen. Albert Kookesh; Sen. Linda Menard; Sen. Joe Thomas
Subject: HB 19

Dear Senators,

David Germini, Electrician, Fairbanks , AK resident since 1981

I wish to express my support for HB 19 / the repeal of DST in AK.

I will make this brief this morning because I leaving for work. I listened to the teleconference Thursday afternoon and all the points I would have made were brought forth, even the star gazing.

I have been advocating this bill since I first heard about it last year and have asked many people(20 or 30) what there opinion of DST is. Overwhelmingly the response was either "it is foolish" or "I don't like it".

I think it should be a persons right to have the time of day be the way it was intended. I find DST very intrusive.

You really should look at the police records. I live in town 18th ave in Fairbanks and in the last week I am hearing a lot more traffic late at night. Last week someone a block away was running a 988 loader to remove snow at 9pm. I called FPD dispatch to find out if there was a curfew and I had to wait because all the dispatchers were busy..... and it wasn't even a Friday night.

In closing, below is a cut and paste from a Channel 11 KTVF-TV on line survey. I looked at it Sunday evening.

Sincerely Yours; David Germini

Do you think Alaska needs to participate in Daylight Savings Time?

Yes; it's difficult enough to be 4 hours off Eastern Time, let alone 5. (9.8%)

No; it's just a hassle and makes no sense here. (85.4%)

It doesn't matter to me. (4.9%)

Christina Apathy

From: Mullikin Surveys [mullikin@xyz.net]
Sent: Tuesday, March 30, 2010 9:37 PM
To: Sen. Donny Olson
Subject: Daylight Savings

Please vote to eliminate Daylight Savings Time and the government mandated necessity of changing our clocks twice a year.

Most people have two clocks – one on the wall and the second one is a biological clock inside their body.

One clock can be reset somewhat easily (or not). However, resetting the biological clock is very difficult and frustrating for most people, including you and me. Children, in particular, are confused by this time change. The damage to each individual twice a year far outweighs any alleged “savings”.

It is not necessary to hire experts about this issue. You already know the correct solution to this problem.

Don & Judy Mullikin
P.O. Box 790
Homer, AK 99603

Christina Apathy

From: Jerad McClure [jeradlainak@gmail.com]
Sent: Thursday, April 08, 2010 8:51 AM
To: Sen. Donny Olson
Subject: HB19

Dear Senator Olson,

I would like to let you know of my support for HB19, the bill to end DST in Alaska. This un-fixed set of time, that has to change twice a year, is a change that causes unnecessary stress and chaos in every Alaskan's life. Sure, we all seem to do well enough with it as it is right now, but in reality we are all simply used to this drastic reprogramming of our daily habits. With the end of DST in Alaska, we will all achieve a better societal harmonious balance with each other. Please do what you can to get this bill out of your committee and passed by the Senate.

Thanks for your time,

Jerad McClure

Christina Apathy

From: Erika Wolter [twoalaskanrivers@gmail.com]
Sent: Friday, April 09, 2010 6:02 PM
To: Sen. Donny Olson
Cc: Sen. Joe Thomas; Sen. Albert Kookesh; Sen. Hollis French; Sen. Linda Menard
Subject: Please Schedule HB19 For Hearing

Senator Olson,

I am writing to you to request that you schedule HB19, "Eliminated Daylight Savings Time" for a hearing in Community and Regional Affairs. This bill passed quickly through the House last year but seems to be stalled in the Senate. With only a week left in the legislative session, and with two more committees after CRA, the bill needs to move forward as soon as possible. I believe the majority of Alaskans support this bill. I know I certainly do.

Sincerely,
Erika Wolter
Anchorage, AK

Christina Apathy

From: Michelle Sikma
Sent: Tuesday, March 16, 2010 10:18 AM
To: Sen. Donny Olson; Sen. Joe Thomas; Sen. Albert Kookesh; Sen. Linda Menard; Sen. Hollis French
Subject: Constituent Comment - SUPPORT HB19 Daylight Savings

Karl Reid
875 Polly Way
North Pole, AK 99705
488-9147
District 11

Supports HB19; wishes to see this bill passed in the Senate quickly.

Michelle Sikma
Office & Constituent Relations Manager
Rep. Tammie Wilson
State Capitol, Room 415
(907) 378-5778-Cell
(907) 465-4797-Office
(907) 465-3884-Fax

Christina Apathy

From: Frizzera, Kathryn I (DNR) [kathryn.frizzera@alaska.gov]
Sent: Thursday, March 18, 2010 8:06 AM
To: Sen. Donny Olson
Subject: Daylight Savings Time

Senator Olson

Please vote to rescind Daylight Savings Time in Alaska.

Thank you!

Kathy

Fairbanks

Christina Apathy

From: CH [spotmom@mtaonline.net]
Sent: Thursday, March 18, 2010 8:16 AM
To: Sen. Donny Olson
Cc: Sen. Joe Thomas; Sen. Hollis French; Sen. Albert Kookesh; Sen. Linda Menard
Subject: PASS THIS BILL!! HB 19 - An Act to Eliminate Daylight Saving Time in Alaska

Importance: High

Please pass HB19 and eliminate the daylight savings time in Alaska. This is an outdated useless leftover from the past.

In the internet age with 24-7 support lines, online shopping, email and a host of other means to communicate, the one hour time change has become meaningless, as if in Alaska "daylight savings" had any meaning anyway!

Businesses who do not want to eliminate daylight savings must only be dealing with the West coast. The one hour change still does not help us work with businesses on the East coast, but somehow we manage that much larger time zone difference.

This bi-annual disruption of our sleep patterns (which we are still trying to recover from since we used to get up at 4:30 AM, now we get up at 3:30 AM!) and the sheer annoyance of resetting 15 clocks twice a year has got to stop.

Sincerely,
Rod and Cathy Herrin
Wasilla, AK
373-7440

Christina Apathy

From: dkbohac@gci.net on behalf of Kent [dkbohac@gci.net]
Sent: Thursday, March 18, 2010 8:35 AM
To: Sen. Donny Olson
Subject: HB 19

Dear Senator Olson

It is my understanding a bill to repeal DST in Alaska (HB 19) passed the state house & is now before the senate.

Please Senator Davis, support HB 19 & repeal daylight savings time in Alaska!

We think in-place of wasting time changing clocks, thermostats, auto clocks, etc. we all can put that time to better use. Let alone getting our human clocks back on time, that by its self gets harder each year!

Thank you for your time.

Mr. & Mrs. Bohac
12320 Liberty rd
Anchorage Alaska
907-345-2703

Christina Apathy

From: Ley Schleich [leyschleich@mac.com]
Sent: Thursday, March 18, 2010 9:20 AM
To: Sen. Donny Olson
Subject: YES to HB 19 An Act to Eliminate Daylight Saving Time

Honorable Senator Olson,

I fully support HB19 and hope you do too.

The time change is detrimental to our health and interferes with the normal adjustment to the seasonal change in daylight. It imposes on us a need to rise in the dark. Travelers, including commuters and school children must contend with dark and treacherous conditions. Our sleep patterns are disrupted again with the daylight that extends well into the night hours.

All this hinders our emotional and social health and our cognitive functioning, in addition t

We deal with a lot of harsh conditions related to weather and nature here that are completely out of our control and we just adapt to them. However, DST is a nuisance at best and truly harmful to our personal and social health...and we can do something about it.

I applaud Representative Fairclough for bringing this forward for consideration, and hope that you vote for it in the Committee and when given the opportunity to do so in the full Senate.

Sincerely,
Ley Schleich
3080 E Wanamingo
Wasilla, Alaska
907-373-0623

Christina Apathy

From: Terry & Vicky Carda [tvcarda@aptalaska.net]
Sent: Thursday, March 18, 2010 9:30 AM
To: Sen. Donny Olson
Subject: HB 19, An Act to Eliminate Daylight Saving Time in Alaska

I wish to have daylight saving time in Alaska eliminated. I feel there is no need for daylight saving time in Alaska. I have also read in Reader's Digest and heard on CNN that there are health problems stemming from people losing an hour of sleep in the spring when daylight saving time begins. Please eliminate daylight saving time in Alaska. Thank you.

Vicky Wontorski

Christina Apathy

From: Mikael & Brian Porcello [mbporcello@ak.net]
Sent: Thursday, March 18, 2010 10:07 AM
To: Sen. Donny Olson
Subject: HB 19

Senator Olson,

Just a quick note to put in my two cents regarding Daylight Savings in Alaska. I am for eliminating Daylight Savings in Alaska. As a parent and teacher, it is one big inconvenience.

Happy Spring and Thanks for all you do,

Mikael Porcello

Christina Apathy

From: Grete Perkins [grete@mtaonline.net]
Sent: Thursday, March 18, 2010 10:13 AM
To: GRETE PERKINS
Subject: Daylight savings

Dear Senator~

I urge you to support the act to Eliminate Daylight Saving!

It just doesn't make sense for Alaska!

Sincerely,

Grete Perkins
Talkeetna, AK

Christina Apathy

From: Bruce Tweet [bktweet@gmail.com]
Sent: Thursday, March 18, 2010 9:01 AM
To: Sen. Donny Olson
Subject: Hearing on HB 19- Eliminate Daylight Saving Time in Alaska

Dear Senator Olson,

Please help do away with Daylight Savings Time in Alaska. I makes no sense to have it in place.

Please vote to Eliminate Daylight Saving Time for Alaska.

[Hearing on HB 19 – An Act to Eliminate Daylight Saving Time in Alaska](#)

Thank you.

Sincerely,

Kathi Tweet

Nome, Alaska

Christina Apathy

From: tacoloco@gci.net on behalf of Anabel Galindo [taco.loc@acsalaska.net]
Sent: Thursday, March 18, 2010 8:59 AM
To: Sen. Donny Olson
Subject: HB 19

Senator Olson

I support House bill HB 19. As a business owner I see no need for daylight savings here in Alaska. I regularly conduct business outside of Alaska and there is no benefit from daylight savings.

Sincerely

Adam Galindo
Vice President
Taco Loco Products
taco.loc@acsalaska.net
Tel: 907-561-1648
Fax: 907-561-1717

Christina Apathy

From: Debby Bossie [debbyb@cityelectricinc.com]
Sent: Thursday, March 18, 2010 9:07 AM
To: Sen. Donny Olson
Subject: Hearing on HB 19 - An Act to Eliminate Daylight Saving Time in Alaska

Senator Donald Olson:
I just want to say that I am totally for this bill.
I do not believe we need Daylight Savings Time in Alaska.
Thank you
Deb

Deborah J Bossie
Contract Administrator
City Electric, Inc.
(907)264-6455

Christina Apathy

From: Jerad McClure [jeradlainak@gmail.com]
Sent: Monday, April 12, 2010 12:50 PM
To: Sen. Donny Olson
Subject: HB 19

Dear Senator Olson,

Please allow HB 19 to be voted on by the committee. It is very important that this bill be allowed to move forward and be voted on by the whole Senate.

Thanks for your time,

Jerad McClure

Christina Apathy

From: dhees@gci.net
Sent: Thursday, March 18, 2010 11:44 AM
To: Sen. Donny Olson; Sen. Joe Thomas; Sen. Hollis French
Subject: HB 19- An Act to Eliminate Daylight Savings Time

I am writing to express my desire to see Daylight Savings Time eliminated from Alaska. When Spring comes each year the days are almost exactly the same time in terms of dark and light. I work and when I get up it is daylight, there is no need to change the hour forward taking us back into darkness in the early morning hours. When I get off work it is still daylight. When it is dark in the morning it is not safe for kids walking to school.

Please do whatever you can to repeal this silliness. Let the day begin and end the same every day.

Thank you very much.

Penni Hees

PO BOX 2115

Kodiak AK 99615

907-486-4025

Christina Apathy

From: Sandy's Insurance [sak@mtaonline.net]
Sent: Thursday, March 18, 2010 11:23 AM
To: Sen. Donny Olson
Subject: FW: Elimination of Daylight Savings Time

From: Sandy's Insurance [mailto:sak@mtaonline.net]
Sent: Thursday, March 18, 2010 11:22 AM
To: 'Senator_Hollis_French@legis.state.ak.us'
Subject: Elimination of Daylight Savings Time

HB 19

It's about time. It makes no sense to continue using Daylight Savings Time as we gain so much daylight anyway. Staying closer to Washington time is just not important since most business is conducted via the internet.

Thanks for listening.

Joanne Jaynes
jo.jaynes@hotmail.com
PO Box 774874
Eagle River, AK 99577

Christina Apathy

From: Ralph &/or Cheryl [hivue@mtaonline.net]
Sent: Thursday, March 18, 2010 11:26 AM
To: Sen. Donny Olson
Cc: Sen. Hollis French; Sen. Joe Thomas; Sen. Albert Kookesh; Sen. Linda Menard
Subject: Hearing on HB 19 - An act to Eliminate daylight saving time in Alaska

Dear Senators,

I am writing to express my thoughts about the elimination of daylight saving time in Alaska. I am for getting rid of it.

My wife and I just shake our heads every spring (especially now that the change has been moved to March instead of April) when we have to deal with our kids having to get up an hour earlier for school. Just put them to bed earlier might be the reply. My answer is that even if you did that, due to the extra daylight in the evening, they may not go to sleep right away. Here in the far north we have enough natural light in the evenings during spring and summer. Why on earth do we think we have to add to it?

I don't buy the argument about it being harder to do business with the east coast if we do away with daylight saving time, either. Hawaii and Arizona have been getting along just fine for years without making the switch twice a year. And Hawaii is even farther from the east coast in terms of time (one hour) than we are!

Please consider eliminating daylight saving time. We don't need it in Alaska. It would make life simpler in our hectic world!

Sincerely,

Ralph Erickson
7732 Hiland Rd.
Eagle River, AK 99577

Christina Apathy

From: David Gallagher [denalidave2@gmail.com]
Sent: Thursday, March 18, 2010 11:41 AM
To: Sen. Donny Olson
Subject: NO DAYLIGHT SAVING TIME

NO DAYLIGHT SAVING TIME

Registered Voter David Gallagher 3141 E 112th Ave. Anchorage, Ak 99516

From: VanWingerden, Doug J [mailto:VanWiDJ@BP.com]

Sent: Monday, March 15, 2010 4:54 PM

To: Sen. Donny Olson

Subject: Daylight Savings Time

Dear Senator Olson,

I am writing to encourage you to support the effort to end daylight savings time in Alaska. This time change has no real benefit to the majority of people who live and work in this state. It is a major inconvenience for everyone except for a few folks who believe it somehow helps commerce. I hope you will consider the desire of the vast majority of regular folks who live here and not succumb to the pressure of a few. Please do what you can to repeal the daylight savings time law.

Sincerely,

Doug VanWingerden
PO Box 521455
Big Lake, AK 99652

Community and Regional Affairs Standing Committee

Written testimony in regard to HB19, Elimination of Daylight Savings, sponsored by Anna Fairclough.

Submitted on March 17, 2010 by
Sandra Matthews
P. O. box 265
Kasilof AK 99610

My husband and I are supporters of HB19, The Elimination of Daylight Savings. Twice every year we have to go through the process of changing the time on 15 or 16 clocks and forcing our bodies to make a sudden adjustment to a new schedule. The time change in the spring is the worst of the two and takes at least several days to adjust to.

A state at our latitude does not gain anything by implementing daylight savings time. We have eighteen to twenty hours of daylight in the summer and eighteen to twenty hours of darkness in the winter. How does shifting time back and forth one hour twice a year change that?

The argument made by the business community that it is easier to make business calls to other states when we are using daylight savings is weak. With computers, fax machines, text messages, e-mails, and cell phones, we already conduct interstate communication around the clock. Now that we are involved in a global economy that same technology helps us get past those worldwide time conflicts.

In my opinion implementing daylight savings is of no use and it should be eliminated.

Christina Apathy

From: Robin [geordiebc@aol.com]
Sent: Thursday, March 18, 2010 11:52 AM
To: Sen. Donny Olson; Sen. Hollis French; Sen. Albert Kookesh; Sen. Linda Menard
Subject: Note from Robin Koutchak on Daylight Savings Time

Dear Senators -

I urge your support of HB 19 to repeal Daylight Savings Time in Alaska. Last session I provided Ms. Fairclough and others with information I acquired which refuted any economical "savings" whatsoever from Daylight Savings Time. In fact, it has also been shown that there is a spike in heart attacks whenever the time changes for DST. I believe this - I know my stress level skyrockets. I think one of the biggest hardships to living in Alaska is trying to get your young kids to bed on time and keep them on a schedule - DST makes this even harder. I can also say that driving in, commuting everyday from the Valley to my job as an assistant attorney general in Anchorage I experience the oddity of watching the sun come up one week and then suddenly, I am driving in darkness in the mornings again. For what? In a few weeks I know it will be light again but how does this SAVE anything???

I am also aware that in the past the argument that kept most Alaskan's clinging to DST was the idea that it was "easier to do business with east coast businesses." In the day of the internet e-mail and texting - with most of you having Blackberry's or iPhones, this idea is outdated and invalid as well.

I would like to participate in the 3:30 hearing today but I will be at work. Besides, "yelling is telling but a letter is better."

Please, open your minds to this change that Alaskan's want. No one will miss an end to Daylight Savings Time. From the kvetching that goes on in my office and my house and the schools my kids go to, I can tell you the majority of people will not have heartburn if you approve this bill. There is NO reason to stall this bill. It's been vetted and it's ready. "Just do it".

Thanks and forgive me for all of my cliche'sI am exhausted.

Robin L. Koutchak as a private citizen and constituent



Robin Koutchak aka GeordieBC@aol.com

From: Wedin John [mailto:john@eye-cue.com]
Sent: Thursday, March 18, 2010 9:43 AM
To: Sen. Donny Olson
Subject: At the end of the day...

you can look back and say you did the right thing.

Dear Senator Olson,

Among all the controversial issues, heated debates, divisive controversies and ponderous dilemmas the legislature faces in 2010, the abolition of DST (HB-19) is a no-brainer. No matter what else does - or doesn't - get accomplished in Juneau this year, if this legislature can abolish DST in Alaska, it will have one bright, shining and positive achievement.

Starting with professional associates and clients, I have informally polled more than 200 Alaskans over the past three years regarding DST, and I can count the supporters of this absurd practice on one hand (LESS THAN 2%). in other words, 98% of the Alaskans I have spoken with are in favor of abolishing DST in Alaska.

*This - to varying degrees - is the Land of the Midnight Sun. We DO NOT save daylight in Alaska when we go through the arduous hoops of turning millions of clocks forward - and back - twice every year. In fact, we expend more energy (natural gas, electricity, etc.) when we implement DST.

*Hawaii and Arizona DO NOT practice DST. Both states decided it did not make a significant difference in their states, and they abolished the practice. IT MAKES EVEN LESS SENSE IN ALASKA.

*We are not sheep, nor a "me too" state that blindly follows what other states do. ARE WE??? DST makes sense in Washington, Idaho, Oregon, Michigan, Illinois, New York, Maine, and a dozen other northern tier states. IT DOES NOT MAKE SENSE IN ALASKA! None. Whatsoever.

*You will find a small hand full of DST supporters...most of them are professional folks who work with east coast enterprises. I am among them. I have clients and associates on the East Coast and northern tier states who practice DST. However, the impact of NOT following their lead on DST poses a very small inconvenience to my business. And, compared to total nonsense and inconvenience of DST here locally, this is really a non-factor.

Please "see the light" here and do the right thing for you, your constituents and most every Alaskan who calls the Last Frontier home.

Sincerely,

John Wedin
john@eye-cue.com
907-248-7663

From: Sara Hornberger [mailto:shornb2@gmail.com]
Sent: Thursday, March 18, 2010 9:43 AM
To: Sen. Donny Olson
Subject: HB 19 - An Act to Eliminate Daylight Saving Time

We oppose Daylight Saving Time and support HB 19. Spring time change to Daylight Saving Time is very disruptive to most people. If there are business people and interests who need the change. let them adjust their personal schedules and not impose their desires, needs, and interests on the rest of us.

Respectfully, Charles and Sara Hornberger - Port Alsworth and Anchorage

From: Vicki Tweet [mailto:dvtweet@yahoo.com]
Sent: Thursday, March 18, 2010 9:49 AM
To: Sen. Donny Olson
Subject: House Bill #19

Please support this bill! It is long overdue. Thank you
Vicki Tweet

From: Kaye Laughlin [mailto:laughlin.kaye11@gmail.com]
Sent: Thursday, March 18, 2010 9:34 AM
To: Sen. Donny Olson
Subject: NO to daylight savings time

Dear Senator Olson:

From discussions with other family members, friends and business colleagues, I've concluded that I am not alone in deciding that Daylight Savings Time has outlived its usefulness with the advent of instant communications. My mother told me that Daylight Savings Time was deemed a necessity during World War II because the farmers were working in the factories and needed the daylight to work in their agricultural fields. Well, you know farming is also a round-the-clock activity now and not dependent on daylight.

I know for a fact that work is accomplished internationally for any given project. For example, when I worked on a wind generation project for Los Angeles, individuals in other countries were working on components of my project while I slept, and vice versa. That same concept exists for Alaskan businesses. Additionally, government continues to work. I can (and do) email my senators/representatives and the President while they sleep – and presto! They respond while I sleep.

I would like to point out a couple of serious downsides to Daylight Savings Time:

- Medication schedules are affected – especially when medications need to be taken at specific times to not conflict or counteract with other medications. There is also the dilemma when to take the medication...add an hour, subtract an hour – or stay on the “clock” schedule and hope for the best.
- SLEEP DISRUPTIONS – sleeping patterns and sleep quality are vital for good health – regardless the age. I would bet you noticed that you get tired at sluggish the “wrong” times, that you are not sleepy when you should be, and that your eating patterns are also altered. Now – think how the lack of sleep is now being discussed in the medical studies as a link to mental and physical conditions including diabetes.

Now – take the sluggish feeling and think about it a little bit. The lack of being alert because of sleep disruptions can easily be translated to mistakes at work and accidents including driving and operating other equipment (including aircraft).

Enough said. My thoughts are echoed by others I've talked with. I am an Alaska resident, business owner and voter since 1981 (and I make sure my kids and grandkids vote too).

Thank you for your time and allowing me to ask you to vote AGAINST Daylight Savings Time.

Kaye Laughlin

907 863 7254

Kaye Laughlin

From: nick danger [mailto:pack122@msn.com]
Sent: Thursday, March 18, 2010 10:50 AM
To: Sen. Donny Olson
Subject: daylight savings

please , no more daylight savings for alaska, vote to get rid of it.

Thank you

From: Karen Glenn [mailto:kglenn@SEAVIEWSEWARD.ORG]
Sent: Thursday, March 18, 2010 10:39 AM
To: Sen. Donny Olson
Subject: Eliminating daylight savings time

I am for eliminating daylight savings time in Alaska.

Karen L Glenn
Administrative Manager
SeaView Community Services
P.O. Box 1045
Seward, AK 99664
907-224-5257 main
907-422-1002 direct (New)
907-224-7081 fax
kglenn@seaviewseward.org

-----Original Message-----

From: Buessler_Joe [mailto:Buessler_Joe@asdk12.org]
Sent: Thursday, March 18, 2010 9:31 AM
To: Sen. Donny Olson
Subject:

Please do us a favor, and dump the DST. It serves us no practical purpose.

Joe Buessler

Christina Apathy

From: Jerry Winchester [jwinchester@winchesteralaska.com]
Sent: Thursday, March 18, 2010 3:40 PM
To: Sen. Donny Olson
Cc: Rep. Anna Fairclough
Subject: Daylight Savings Time

Senator Olson,

I wanted to express my sincere and complete support of eliminating Daylight Savings time from Alaska. I am a life-long Alaskan and have extensive experience traveling Alaska as an Architect and lover of the Outdoors in my 57 years.

1. Humans are much more tied to Sun time than our arbitrary clocks. There is significant evidence that we, as humans, are geared to sun time or daylight.
2. Daylight Savings Time was developed by the nation to try and save daylight in the summer due to the latitude of the nation as a whole and the changes of daylight in the summer. This was not created for Alaska where our daylight is radically different.
3. Alaska has 5 time zones if they were allocated per the actual sun times from Southeast Alaska to the Aleutians.
4. With the advent of Alaska Time many years ago we arbitrarily set our clocks to one hour east of Sun Time during the Winter, in Anchorage, and two hours east of Sun Time in the Summer with Daylight Savings Time. This effectively made South East Alaska the standard for Alaska Time Zone. For West coast of Alaska, like Bethel and Nome they are two hours off of Sun Time in the Winter and Three hours off in the summer. This Alaska Time Zone was obviously set up for South East Alaska and with the acceptance of Central Alaska, but with no clear idea of the major implications to Western Alaska.
5. With most of Alaska two hours off of Sun Time in the Summer and much of Alaska three hours off, this seriously influences the daily schedule of all of Alaska and specifically rural Alaska.
6. I believe that this time change has a significant effect on our school children their education. Children are asked to get up earlier and go to school earlier by Sun Time than anywhere in the nation by at least two hours. There is significant evidence that children do not learn well in the early morning, especially in High School. Go to any High School in Anchorage and a large percentage of students are very groggy or asleep the first two periods of the day. This is not an issue that they did not go to bed early enough, it is that their bodies are asked to operate significantly off of Sun Time, daylight.
7. We need to address this issue in all its implications, not just connecting to New York Stock Exchange, or satisfying SE Alaska.

Thanks for your attention to this matter. Jerry Winchester

Winchester Alaska, Inc. - Architects & Planners

Gerald (Jerry) L. Winchester, Architect

Mail: 645 G St. Ste 100-613

Anchorage, Alaska 99501

Physical: 425 G St., Ste. 510

Anchorage, Alaska 99501

Phone: 907 272-4347

Mobile: 907 230-7158

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e-mail: jwinchester@winchesteralaska.com

**PUBLIC
TESTIMONY
OPPOSING
HB 19**

Christina Apathy

From: Joe & Billie Hardy [jhardy@alaska.net]
Sent: Wednesday, March 17, 2010 8:33 PM
To: Sen. Donny Olson
Subject: HB 19 NO

I do NOT support HB 19.

We have a hard enough time staying in step with business in the rest of the country as it is.

I would be in favor of the whole country eliminating daylight savings time, NOT just Alaska.

Thank you,
Billie Hardy

Christina Apathy

From: CJ Floyd [cjfloyd49@earthlink.net]
Sent: Wednesday, March 17, 2010 9:07 PM
To: Sen. Donny Olson
Cc: Rep. Anna Fairclough
Subject: HB19 -- Revocation of Daylight Savings Time in Alaska

Dear Sen. Olson:

As chairman of the Senate Community & Regional Affairs committee I urge you to take swift action to defeat HB19.

Certainly the Legislature has more urgent and critical matters with which to deal.

Nothing of value would be gained by forcing Alaska to be further out of step with the rest of the nation than it is already. Perhaps in the year 3535 the Alaska Legislature will have resolved the many urgent and pressing matters before it and will have the time to tinker with such petty and trivial matters as the relevance of Daylight Savings Time. Until then I urge you to waste no more valuable legislative time with this type of insignificant and irrelevant nonsense.

Respectfully yours

Curtis J. Floyd

An Alaska voter

Christina Apathy

From: Frontier Heating Concepts [fhcinc@mtaonline.net]
Sent: Wednesday, March 17, 2010 10:13 PM
To: Rep. Anna Fairclough; Sen. Linda Menard; Sen. Albert Kookesh; Sen. Hollis French; Sen. Joe Thomas; Sen. Donny Olson
Subject: Re: Update on Daylight Saving Time - Hearing to be held Thursday, March 18, 2010 @ 3:30pm
Attachments: pastedGraphic.tiff

Well -

I normally don't respond back to global emails but this one I will.

I **do not** nor **will I** support any change to the Daylight Savings Time change. Most of America is on it now. It was years and years while living in Ohio that Indiana or parts thereof didn't change it was always a challenge to keep track of the difference in time when conducting business.

Again - I'm not normally boisterous but I am hard pressed to think that this issue is worth the money (Alaskans' money) to be spent on trying to change

Our forefathers did this for a reason. Let's not try to re-create the wheel or throw some extra spokes in it.

Leave it alone!

Thanks for allowing me to share my thoughts...

Andrew Good, Owner



Phone 907-355-8031
Fax 907-746-8032
Address 14067 E. Doc McKinley Ave.,
Palmer, AK 99645

www.frontierheatingconcepts.com

On Mar 17, 2010, at 4:12 PM, Rep. Anna Fairclough wrote:

Daylight Saving Time Update...

Christina Apathy

From: wilnbev@ak.net on behalf of Willard N Bev [wilnbev@ak.net]
Sent: Wednesday, March 17, 2010 10:38 PM
To: Sen. Donny Olson
Subject: Daylight Savings
Attachments: 02.jpg; stampa_girl_line_en.gif

Dear Sen. Olson:

I am in favor of keeping Daylight Savings Time, especially in summer. When our children were young we'd take them on evening picnics after work. Those are among their fondest memories. That extra hour, even with long hours of light, gives families a chance to play together. It also allows the Alaska resident to fish for several hours after work--not everything needs be done for the visitors! Lastly, and perhaps most important to many businesses and those who have loved ones on the East Coast, four hours difference is enough! Five hours would seriously compromise many. Thank you for your attention.

Beverly Dunham
Seward



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Christina Apathy

From: kesslerj@aol.com
Sent: Thursday, March 18, 2010 12:06 AM
To: Sen. Donny Olson; Sen. Joe Thomas; Sen. Hollis French; Sen. Albert Kookesh; Sen. Linda Menard
Cc: kesslerj@aol.com; Rep. Anna Fairclough
Subject: Comments for Daylight Saving Time - Hearing Thursday, March 18, 2010
Attachments: image002.jpg

Honorable Senators Olson, Thomas, French, Kookesh and Menard:

Rep. Fairclough sent this message to me today asking me to comment to your committee about HB 19 – An Act to Eliminate Daylight Saving Time in Alaska.

I am very much AGAINST eliminating daylight saving time in Alaska (with one possible exception).

My reasoning is simple: there is little to gain -- only eliminating the bother of changing clocks twice per year and having to endure minor modifications to the biological clock. On the contrary, the loss of additional business-contact time with the rest of the United States is dramatic. Currently most of Alaska is 4 hours behind Washington DC, 3 hours behind communities in Texas, and 1 hour behind Seattle/Portland. These locations are where Alaska does most of its lower 48 business. And there is A LOT of lower 48 business. Eliminating daylight savings would make us 5 hours behind Washington DC, 4 hours behind communities in Texas and 2 hours behind Seattle/Portland during a large part of the year. The inconvenience for my job, where I work with folks in Washington DC would be dramatic. We would have a total of 3 hours to get work done. 4 is bad enough -- 3 would be much more than 25% worse. I believe the true economic cost of eliminating daylight savings and being 1 more hour away from these important lower 48 communities would be significant.

The one possible exception would be for far western Alaska which is on Hawaii-Aleutian time. If those in Adak and west were OK with not using daylight savings, that might be OK. By not changing they would stay consistent with the rest of their time zone (State of Hawaii). With few people in that time zone, it might not make a great difference if they're two versus one hour different from the rest of Alaska. You should specifically ask residents of the Hawaii-Aleutian time zone their preference.

Thank you for listening. Have a good hearing tomorrow. And, again, my recommendation is to NOT ADOPT this legislation.

/s/ Steve

Steve Kessler
2820 Kempton Hills Dr
Anchorage, AK 99516
kesslerj@aol.com

-----Original Message-----

From: Rep. Anna Fairclough <Representative_Anna_Fairclough@legis.state.ak.us>
Sent: Wed, Mar 17, 2010 3:12 pm
Subject: Update on Daylight Saving Time - Hearing to be held Thursday, March 18, 2010 @3:30pm

Christina Apathy

From: David Thomson [thomson@gci.net]
Sent: Thursday, March 18, 2010 6:34 AM
To: Sen. Donny Olson
Cc: Sen. Albert Kookesh; Sen. Joe Thomas; Sen. Hollis French; Sen. Linda Menard; Sen. Dennis Egan
Subject: HB 19 Daylight Savings Time - opposed to repeal

Dear Senator Olson:

RE: Senate CRA Committee hearing on HB 19

I wish to register myself as opposed to repealing Daylight Savings Time (DST) in Alaska. I am not able to attend the hearing today, March 19, on HB 19. Please accept this email as my testimony.

As a resident of Southeast Alaska, DST does provide more sunlight. I have lived in Juneau for 26 years and remember when we were on Pacific Time. When the state went to 2 time zones, it was a compromise for Juneau with regards to summer daylight – the amount of summer sunlight was reduced. Overall, I think it was a good choice to consolidate time zones for business and life within the State. Repealing DST would mean another loss of summer sunlight in Southeast. That would diminish my quality of life. Evening daylight in southcentral and interior would remain abundant, so many may see no difference and encourage the repeal.

I really don't understand the motivation by some to encourage repeal of DST. What is the great advantage to repeal it?

The sponsor, Representative Fairclough, contends that educators feel it has an adverse impact on our children with regard to taking critical exams. I don't understand how that conclusion can be drawn. It is the middle of March in Juneau right now and the sun has risen before school starts. In another week, that will be true in Anchorage. If exams are taken in April or May, what is the issue regarding sunlight?

I do not find the task of changing clocks cumbersome and time consuming. Many devices now come with a simple switch to adjust to DST. Those who find the switch bothersome are really only late for Sunday activities once a year in the spring when the clock moves forward. The change in fall gives another hour of sleep and plenty of time to arrive at church.

For me it's a quality of life issue. Life is better with DST. If I keep the lights off a little longer and the thermostat lower due to the sunlight, it's a bonus.

~thank you.
David Thomson
Juneau

Christina Apathy

From: Suzy Crosby [suzy@alaskastatefair.org]
Sent: Thursday, March 18, 2010 4:55 PM
To: Rep. Anna Fairclough
Cc: Sen. Donny Olson; Sen. Joe Thomas; Sen. Hollis French; Sen. Albert Kookesh; Sen. Linda Menard
Subject: FW: Please leave our daylight hours alone -- Keep DST in Alaska! -- Please delete previous copy

Please delete previous copy sent from this email, if you received it.

Thanks,

Suzy

March 18, 2010

Dear Ms. Fairclough,

I was extremely dismayed to hear of the House of Representatives' efforts to end Daylight Savings Time in Alaska, and disappointed with the way you slanted your "research questions" to ensure that the answers would generally validate only one of the two opposing viewpoints.

First, here are my reasons for requesting that Daylight Savings Time be left alone:

1) The majority of Alaskans either work or attend school at standardized hours, and their lives operate around a schedule that incorporates those daytime hours and a typical bedtime following the 10:00 news. From late May through mid-July, sunrise averages 4:30 am -- what is the benefit of having the sun shining at 3:30 am when the vast majority of people are asleep? It is extremely unlikely that people are going to keep getting up earlier and earlier so as to enjoy the extra daylight on long summer MORNINGS if DST is repealed, since their work hours will remain unchanged.

2) On the other hand, the majority of Alaskans treasure the opportunity to come home after a day of work in the summer and have long daylight hours stretching into the evening. Currently the sun sets between 10:00 and 11:00 pm throughout the entire month of May and most of July and August. Most Alaskans would be quite unhappy about having to end their outdoor evening activities at 9:00 pm due to darkness during the early and later parts of the summer. All of our daylight-dependent activities (sports, outdoor concert events, picnics, festivals, etc.) are based around having daylight late into the evening, and those in the later part of the summer would suffer the most. Again, due to typical work schedules, late-summer events that customarily start at 7 or 8 pm cannot readily be rescheduled to start at 6 pm in order to finish before dark -- people attend events based on their work schedules.

Here's just one specific example using one of Alaska's biggest statewide events, attended by nearly 300,000 people annually: Evening concerts at the Alaska State Fair start at 7:30 pm, which allows time for Anchorage Fairgoers to negotiate traffic, park their vehicles and be at the concert by start

time. Sunset on Sept. 1 is 9:09 pm, which allows ample time for a 90-minute show and an exit from the Fairgrounds before pitch dark sets in. With the loss of DST, either the Fairgoers will be in pitch darkness for the last half of the show, or the concert would have to start an hour earlier, which would force people to leave work early in order to make it in time. Now apply that same concept to whatever activities you or your family and friends pursue on a late summer evening – whether it's a kids' soccer game, fishing, a bike ride, or just a backyard barbecue, your sense of being in the "Land of the Midnight Sun" just came to a screeching halt. Latitudes in southern Canada will be able to lay equal claim to the title, as our sunset times would be the same as (or earlier than) theirs.

3) As far as business is concerned -- we are already out of sync enough with the East coast by being four hours behind. Eliminating DST would put us an additional hour behind Seattle and **five** hours behind the East coast for **eight months** out of the year, creating further difficulty in conducting business nationwide. Worse, no one would ever be able to keep track of what time it really is in Alaska as it would be constantly changing back and forth. Besides being at an added disadvantage in doing business, being another hour separated from friends and family in the lower 48 would add further inconvenience.

4) Has anyone considered the fact that all computers, cell phones and other electronic devices automatically correct the time for DST? It's not that difficult or time-consuming to set household clocks and thermostats in spring and fall, but just try telling your cell phone to set to a different time. Many of today's cell phones are satellite programmed to reset to time zones and local times. As an aside – we've all learned to check smoke detector batteries when we change our clocks, and I wonder if the number of fire fatalities would increase statistically without the semi-annual reminder associated with DST? (I add this comment in response to the statistics which suggest an increased rate of heart attacks following the time change.)

5) I find it appalling that the legislature should be the ones taking it upon themselves to make a decision that will have such a far-reaching and disruptive effect on the lives of over half a million people, in ways that most will not recognize until they realize they have been cheated out of over 200 hours of evening daylight in the summer. Trading off our evening light for additional hours of morning light is not in the best interest of most Alaskans. Let the people whose lives will be affected at least have a say by voting -- this issue is far too significant to be decided by a few individuals in Juneau.

Now take another look at these questions which you circulated as part of your "research" :

- Does DST really save energy, especially today when many people work inside?
- Does DST have anything to do with farming? Lots of people thought it did in the past.
- Does DST adversely impact student performance?
- Does DST in Alaska provide more sunlight?
- Does DST create more darkness in the morning?
- Has technology changed to improve communication within the business community?

These questions might not be out of place in a classroom, but some are rather short-sighted, as well as biased, in this context. Why not rephrase some of them to address specific and pertinent issues? For example:

- *Does gaining an hour of morning* daylight really save energy, especially today when many people work inside?
- Does DST in Alaska provide more sunlight *in the summer evenings, when the majority of Alaskans can benefit from it most?*
- Does *it affect you adversely when* DST creates more darkness in the morning *for a few weeks, considering that in exchange you get an extra hour of daylight after work?*
- Has technology changed to improve communication within the business community, *or will being an extra hour behind the rest of the country for 2/3 of the year still be a detriment and an inconvenience in both your business and personal communications?*

If the primary objection to Daylight Savings Time is the adverse effects of the semi-annual time change itself, then based on my arguments in favor of having that extra hour of daylight at the end of the day instead of in the morning, I would propose the following compromise: keep Alaska on Daylight Savings Time all year long. This would address both the concerns of summer outdoor evening activities and the business time lag with the East Coast, as well as eliminating the need to change clocks back and forth. Please consider this as a viable third choice. If the concept of darker mornings is burdensome for residents of western Alaska, then perhaps the change that needs to be addressed is that of adding back one of the time zones eliminated in 1983.

Respectfully submitted,

Suzy Crosby
Wasilla

Christina Apathy

From: Gregory F Durocher [gfdurocher@usgs.gov]
Sent: Thursday, March 18, 2010 2:45 PM
To: Sen. Donny Olson; Sen. Joe Thomas; Sen. Hollis French; Sen. Albert Kookesh; Sen. Linda Menard; Rep. Anna Fairclough
Subject: Reasons to preserve Daylight Savings Time

Hello all-

Unlike many people who oppose Daylight Savings Time solely because they don't like the inconvenience of re-setting a clock twice a year, there are those of us who have to deal on a daily or weekly basis with our headquarters or business partners on the East Coast, and who would be severely hampered by us moving 5 hours away from them instead of the current 4 hours for half the year.

There are also those who are opposed because they have to wait 10 days for the sun to catch up following the change. I know one writer to the editor (retired by the way - so not concerned about business), who goes on several outside trips each year - and has to put up with much more than just an hour each time. Suddenly our change inconveniences his mornings here, but it only takes 10 days for the sun to catch up at nearly 6 minutes per day of change.

If the argument about a 1 hour change adversely affecting children is to be believed, then we should cancel spring breaks, saving thousands of children from being exposed to multiple time zones in only 1 week! I don't think we could cancel Christmas vacation however - but that specious argument would suggest that we should!

In closing, consider those whose jobs depend upon staying connected rather than those who are merely inconvenienced by clock-setting!

Thanks,

Greg Durocher
U. S. Geological Survey
Alaska Science Center - ESIC
gfdurocher@usgs.gov
907-786-7009

Earth Science or Alaska Questions?
Send inquiries to askusgs@usgs.gov

Christina Apathy

From: Tony Bell [silver_hawk12ga@hotmail.com]
Sent: Thursday, March 18, 2010 1:40 PM
To: Sen. Donny Olson
Subject: Re: Daylight Saving Time

Senator,

Regarding the daylight saving issue: This autumn do not "fall" back one hour. This puts Alaska in the Pacific time zone and only three hours behind D. C. for 18 weeks. Next Spring we do not "Spring" ahead and that will leave us where we are today. We don't change and the differences with other zones are mitigated.

Respectfully,

Francis A. Bell
17333 Toakoana Drive
Eagle River, AK 99577-8510
907-969-1403 home
90-441-6168 cell

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--Forwarded Message Attachment--

From: silver_hawk12ga@hotmail.com
To: olson@legis.state.ak.us
Subject: Senator, Regarding the daylight saving issue: Thi...
Date: Thu, 18 Mar 2010 13:36:03 -0800

Senator,

Regarding the daylight saving issue: This autumn do not "fall" back one hour. This puts Alaska in the Pacific time zone and only three hours behind D. C. for 18 weeks. Next Spring we do not "Spring" ahead and that will leave us where we are today. We don't change and the differences with other zones are mitigated.

Respectfully,

Francis A. Bell
17333 Toakoana Drive
Eagle River, AK 99577-8510
907-969-1403 home
90-441-6168 cell

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<http://www.windowlive.com/campaign/thenewbusy?ocid=PID27925::T:WLMTAGL:ON:WL:en-US:WM HMP:032010 3>

Christina Apathy

From: wilnbev@ak.net on behalf of Willard N Bev [wilnbev@ak.net]
Sent: Thursday, March 18, 2010 1:30 PM
To: Sen. Donny Olson
Subject: Daylight saving's time
Attachments: hatdog4.jpg; stampa_girl_line_en.gif

Please do NOT change this!!

As it is we have to make major adjustment's when doing business with the lower 48.

The 4hrs difference now with the East coast is awkward enough to make it 5 is even worse. Even closer is the west coast and making it 2hrs would not help.

On the other side of the coin is that extra hour of Sun was very nice to have when I still had family living at home. It added quality time to many of our evening outing's and fishing trips with the Kid's.

So again please don't put us back into the day's . Was not this the reason we deleted some of the time zone.s in Alaska a few year's back to lessen the time difference's between our state and the other's?

Thank you for the opportunity to comment on this.

Willard Dunham Mayor
City of Seward
Box 167
Seward,Alaska



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Christina Apathy

From: Jean Lewis [jlewis@cityofseward.net]
Sent: Thursday, March 18, 2010 3:22 PM
To: Sen. Donny Olson
Cc: Sen. Joe Thomas; Sen. Hollis French; Sen. Albert Kookesh; Sen. Linda Menard
Subject: Daylight Saving's Time
Attachments: image001.jpg

Please do NOT change this!!

As it is, we have to make major adjustments when doing business with the lower 48.

The 4 hours difference now with the East coast is awkward enough to make it 5 is even worse. Even closer is the West coast and making it 2 hours would not help.

On the other side of the coin is that extra hour of sun was very nice to have when I still had family living at home. It added quality time to many of our evening outings and fishing trips with the kids.

So again, please don't put us back into the days. Was this not the reason we deleted some of the time zones in Alaska a few years back, to lessen the time difference's between our state and the others?

Thank you for the opportunity to comment on this.

Willard Dunham, Mayor
City of Seward
PO Box 167
Seward, Alaska 99664

Jean A. Lewis

City Clerk

P.O. Box 167

Seward, Alaska 99664

(907) 224-4045

clerk@cityofseward.net

Christina Apathy

From: B&K Bracken--Petersburg, AK, Lodging&Tours [visitpetersburgalaska@gmail.com]
Sent: Thursday, March 18, 2010 1:04 PM
To: Rep. Anna Fairclough; Sen. Donny Olson; Sen. Joe Thomas; Sen. Hollis French; Sen. Albert Kookesh; Sen. Linda Menard
Subject: Re: Update on Daylight Saving Time - Hearing to be held Thursday, March 18, 2010 @ 3:30pm

Dear Representative Fairclough and members of the Senate Community and Regional Affairs Committee,

When the subject of the daylight savings time change came up, I said I was in favor of dropping it.

However, I must clarify that. I am in favor ONLY if the rest of the US drops it.

I think it's a ridiculous idea, but I do feel we should stay in step with the rest of the country.

For example, most Alaskans have family spread across the country. I am now four hours earlier than my family in Massachusetts. If we drop daylight savings time, I will be five hours earlier for eight months of the year.

With Washington DC in the Eastern time zone, we have very few business hours to deal directly with federal offices. By 8:00 a.m. here, it's already lunch hour there, so with the status quo we've lost five hours. If we change daylight savings time, we've lost another hour. I'm sure this has been pointed out.

There are many scenarios that could be shared.

It is my wish to maintain the status quo--keep Daylight Savings Time the way it is, unless the rest of the country changes.

Respectfully,
Kathy Bracken,
Petersburg, Alaska
Alaska resident since 1971

3/18 @ 3:30pm Shirley Platt from Palmer. 907-745-7826

Against Daylight Savings Bill. Not necessary.



February 5, 2010

Senator Donald Olson
Room 508
State Capitol
Juneau, AK 99801-1182

Re: HB 19

Dear Senator Olson,

I'd like to let you know how the Daylight Savings Time bill in front of the legislature would negatively affect television broadcasters in Alaska.

You may remember that prior to the beginning of satellite television in 1984, television programs aired in Alaska on a one-week or two-week delay. The business of selling advertising to agents on the east coast was largely conducted by mail. Neither is the case today.

KTUU airs most of its programming at the same time it airs in LA. Our feed for NBC Nightly News, for example, comes in at 5:28:30pm and airs live. It begins in LA at 6:28:30pm. Our prime time line-up airs 7-10pm, while in LA prime time is scheduled from 8 to 11pm. The proposal in front of you would require that entire blocks of programming would have to be recorded and played back at an appropriate time, requiring additional investment in equipment and personnel.

Children's programming is also a concern. We are required by the FCC to air three hours each week of programming targeted to meet the educational needs of children. That programming must air in consistent time periods, no earlier than 7am. NBC schedules weekend sports to begin at 2pm ET, or 10AM AK. We air our children's programming from 7am to 10am on Saturday.

The business of negotiating and selling advertising across time zones is always a challenge when doing business with, or from, Alaska. Adding another hour to our time difference adds to that difficulty.

I'm sure you're hearing from other businesses that interface with the "Lower 48." While the merits of Daylight Savings time in Alaska can certainly be debated, the merits of facilitating business relationships cannot. Exacerbating the time difference is simply a bad idea.

Sincerely,

Susan Lucas
President/General Manager
Northern Lights Media Inc.
KTUU-TV

Northern Lights Media, Inc

701 East Tudor Road • Suite 220 • Anchorage, AK 99503-7488

(907) 762-9202 • Fax (907) 561-0882

www.ktuu.com

Christina Apathy

From: Laurie Prax [laurie@kvakradio.com]
Sent: Wednesday, March 17, 2010 3:58 PM
To: Sen. Donny Olson
Subject: HB 19 - Daylight Savings Opposition Remarks

Dear Senator Olson,

I am writing about the proposed Daylight Savings Time bill HB19. I own KVAK AM and KVAK FM in Valdez, Alaska and am very concerned by the ramifications your bill presents if Alaska eliminates daylight savings time and the rest of the world does not.

In the radio and television business, on-air programming is operated by computer scripts that rely on precise timing. Many programs we rely on are picked up via satellite at a specific time of day. Most of these programs, like ABC programming, are produced on the East Coast. If daylight savings time were eliminated in Alaska, we would not only have to account for the four hour time difference we do now, but re-write our scripts each time New York moves an hour ahead or back for daylight savings time. This is a considerable amount of additional programming and, in the case of a small station like mine, is substantial enough that I would have to consider dropping some of the valuable programming our community now enjoys.

Our station conducted an on-air poll about eliminating Daylight Savings Time on our website. Our on-air and website question was "What do you think about eliminating daylight savings time?" We received a lot of responses in support of eliminating daylight savings time. Most responses were from people who wanted more sunlight. The following week, we asked the question, "If Alaska eliminated daylight savings time and the rest of the US did not, would that present any problems for you?" We received many comments from people who said they had computer programs that were time specific and they would have to spend considerable time and energy figuring out what to do if daylight savings continued elsewhere, but not in Alaska. One respondent said he had answered the week prior in support of the proposal, but after thinking about it thought it was a bad idea. Several respondents said that changing daylight savings time would be fine as long as the rest of the United States did. Most were concerned that it would be hard to keep up with time elsewhere when making telephone calls for business or pleasure.

I am concerned that the only issue that has been presented is one of health. While that is important and I think you probably have great support in the proposal for those valuable health benefits, I think most people are assuming this proposal is not just limited to Alaska and therefore not realizing the implications of the change. I believe the burden this change would place on business is great enough that it should not be considered unless it is part of a national change.

I am President of the Alaska Broadcasters Association and we when we first discussed your proposal at one of our meetings, board members were ambivalent about the change. When we started thinking about how it would affect programming at each of our stations, it became apparent it would pose a large challenge for broadcasters in our state.

If you are interested in understanding what the ramifications changing daylight savings time would pose for broadcasters, I would be happy to discuss with you or your staff in more detail. I'm sure I could even arrange a tour and explanation at a station in Anchorage, Juneau or via the internet.

I thank you for your time.

Best Regards,

Laurie Prax
KVAK Radio
PO Box 367
Valdez, AK 99686
907-835-5825
907-255-5825 (cell)

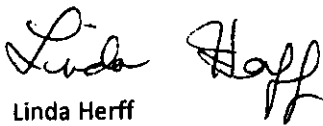
3/18/10

To: Crystal Koeneman @907 465 2819

I am opposed to HB19. I don't care if it is a chore to change all the clocks, because here in South East we enjoy that extra hour of daylight in the evening. I usually mow my lawn at night.

Of all the information presented by Representative Anna Fairclough, I'm most concerned about being two hours behind the west coast and five hours behind the east coast. As a business owner, this will be a pain in the neck.

Sincerely,


Linda Herff

KINDER KOMFORT

P. O. Box 1186

Petersburg, AK 99833

907-772-4100

**Petersburg Legislative
Information Office**
State of Alaska
Legislative Affairs Agency

PO Box 1470
Petersburg, AK 99833
Petersburg_ljo@legis.state.ak.us
907.772.3741 Fax 772.3779

FAX TRANSMISSION

TO: Senate Community & Regional Affairs
FAX: 907.465.4821
PHONE: 907.465.3707

DATE: 3.18.10

3 page to follow this cover. 2 pages written copy of oral testimony given before SCRA and 1page written comment for HB 19: Eliminate Daylight Savings Time. Please enter it into the Bill record.

Thank you,



Ellen Rojcewicz
Petersburg LJO

I oppose HB 19.

It seems a driving reason to eliminate daylight saving is the time change in spring and fall inconveniences Alaskans for a few days. If we don't stay in synch with most of the rest of the US, all Alaskans will be inconvenienced a lot more than that. In SE Alaska we will be inconvenienced every day during spring, summer and fall.

Remember we already lost an hour of our evenings back in 1983. HB 19 adds a second hour for the part of the year when most of us spend time outdoors. Talk about driving Alaskan away from healthy outdoor activities towards more sedentary indoor activities.

Driving into Petersburg one sunny evening last spring, I noticed how many people were headed out the road for a picnic or other recreation after work. Then I thought, oh my, if HB 19 passes, loss of that one hour will significantly cut into their time to enjoy nature. On that day loss of that hour would have meant they would be driving out the road as the sun set. Remember southern southeast Alaska has much less evening light than the rest of the state. I treasure our long summer evenings. How sad it will be to lose them.

Ironically, the sun will set in Seattle, Washington, which recognizes daylight savings time, later than Petersburg every day of the year. The same goes for Portland, Oregon. Even San Francisco, California will have later sunsets than Petersburg all but 54 days of the year

I can understand why residents of Anchorage and points further west don't like daylight savings. They have to get up in the dark in spring and fall. The problem developed when Alaska, except for far out the Aleutians, was combined into one time zone. If you overlay a map of Alaska over the continental US, you can see the tip of the Aleutians reaches the shore of the Pacific Ocean in California while southern SE Alaska touches the Atlantic in

Georgia. How many Americans would like to see the lower 48 compressed into one or two time zones?. It was crazy to put the state with the greatest distance between east and west into essentially one time zone. Much smaller states including Oregon, North Dakota, South Dakota, Nebraska, Kansas, Texas, Michigan, Indiana, Kentucky, Tennessee and Florida are all located in two time zones.

I think most Alaskans would be much happier to go back to the old time zone divisions and stay in synch with the rest of the nation. A few days of inconvenience has less impact than HB 19 would promulgate.

For southeast Alaskans HB 19 means: If you want to go fishing after work, have a ball game or barbecue, you'd better stock up on flashlights and plan on breakfast barbecues. After all, sunrises will be before 3:00 AM at the summer solstice. If you value long summer evenings, perhaps you should move somewhere else.

Otherwise HB 19 should be good news for the Petersburg Utility Department. More evening indoor time equates to more revenue from use of electricity. The hospital clinic should be happy because more indoor time equates to poorer health. Same for Petersburg Mental Health Services.

Finally, if you must mess with time in Alaska, if Alaskans just can't deal with changing their clocks with the rest of the nation, I suggest one amendment. Instead of staying on standard time year round, stay on daylight saving time year round. That change would be far preferable

Thank you.

Don Cornelius
P.O. Box 1727
Petersburg, AK 99833

doncorn@gci.net

Christina Apathy

From: Don Cornelius [doncorn@gci.net]
Sent: Friday, March 19, 2010 9:23 AM
To: Sen. Donny Olson
Subject: HB 19 corrected message

Dear Senator Olson:

Thanks for hearing my testimony regarding HB 19 yesterday. A couple of other ideas popped into my mind last night.

Rep. Fairclough claimed the wave to eliminate DST is developing near the equator and spreading north. State's that stay on standard time include Hawaii and Arizona. These states and equatorial regions have one thing Alaska doesn't. Heat. When I travel to tropical areas I'm relieved when the sun goes down. At last I can go outside to sit on a deck or wherever and enjoy the relief. In Alaska it gets cold, biting insects descend on us. I go indoors. Earlier sunsets equate to going inside earlier. That's because we're an evening oriented society so, for most Alaskans starting our day one hour earlier and going to bed one hour earlier usually isn't an option

She claimed that electricity use rises when the country goes on DST. I've read the opposite. That DST saves about one percent in electric usage.

Here's what happened to me once. My wife, Karen, and I were making a dash to catch an Alaska ferry. We arrived in Beaver Creek, Yukon, just before midnight on a most-of-the-night drive. Just minutes before Canadian customs closed. Now we're one hour off from western Canada and if we eliminate DST, we'll be two hours off. Better get to Beaver Creek or the Haines border crossing before 10:00 PM or you'll be stuck there for the night. Coming into Alaska from Canada early in the morning you'll have to wait two hours for US Customs to open. One more inconvenience.

Thanks,

Don Cornelius

Christina Apathy

From: Jim [jimer53@starband.net]
Sent: Thursday, March 25, 2010 8:54 PM
To: Sen. Albert Kookesh; Rep. Beth Kerttula; Rep. Anna Fairclough; Sen. Joe Thomas; Sen. Donny Olson; Sen. Hollis French; Rep. Bill Thomas
Subject: We don't want to drop DST
Attachments: RE_ Testimony concerning HB19 .eml

I sure hope the legislators from Anchorage et al don't have their way in dropping DST (nothing against you Anchorage legislators listed in my address bar). We in Southeast Alaska stand to lose an hour of our precious evening daylight. Please don't let this happen.

Some guy from Petersburg said today in the empire that Southeasterners are not fighting hard enough. All I can say is wow.

I still say the desire of Anchorage and other western populations to drop DST is another way of saying they don't like our new time zones that came into effect in Sept 1983. Change the clock cannot be that big of deal. Alaska time - dst or not - was a result of an effort from a Juneau group to save the capital, much like the FRANK initiative. I say change our time zones back to where they were in 1982. Southeast on Pacific time and Anchorage two hours behind us. It's only right. Anchorage has a point, but they don't need to drag us all into this time change to their liking only.

Jim Erickson
Hoonah, AK

Christina Apathy

From: Margo Waring [margowaring@gmail.com]
Sent: Thursday, March 25, 2010 7:23 PM
To: Sen. Joe Thomas; Sen. Hollis French; Sen. Albert Kookesh; Sen. Linda Menard; Sen. Donny Olson
Subject: HB 19

Dear Members of the Senate Community and Regional Affairs Committee,

A recent letter to the editor of the Juneau Empire brought to my attention the swift passage of HB 19 through the Legislature. I ask you to halt that progress. Abolishing daylight savings time is a bad idea for residents of southeast Alaska.

First, you all remember the "compromise" that the citizens of Alaska agreed to in 1983 to go on to a single time zone, Anchorage's. The adoption of the single time zone was contentious but most of us realized the benefit. I worked for the state in the decade prior to the single time zone. Contacting multiple individuals practically required a spreadsheet. Adopting the single time zone was a hardship to people in Southeast and to people in Western Alaska whose time zones had more accurately reflected their position on the globe. For Southeast, the trade off was that we would put up with morning darkness for much of the year and in return have long evenings in the summer.

Now, Western Alaska is asking to tip the balance of the compromise more in their favor and, thereby, relegate Southeast to short summer evenings and long hours of sunlight while we sleep. It does us no good to have summer sunshine at 2:00 in the morning. We would rather have it at 9:00 in the evening.

Please do not keep HB 19 in your committee.

Margo Waring

Christina Apathy

From: Karen Schramek [kschramek@gci.net]
Sent: Friday, March 26, 2010 3:04 PM
To: Sen. Donny Olson
Subject: HB 19 - Time Change

Hello,

My husband and I are really really opposed to changing the states time, at least for SE Alaska. If anything, we'd like to go back to Seattle time.

Please stop this bill in the Senate!

Thank you,

Karen and Jim Schramek
Petersburg, AK

Christina Apathy

From: Doug Riemer [nordicair@gci.net]
Sent: Friday, March 26, 2010 7:08 PM
To: Sen. Donny Olson
Subject: HB 19

Daylight savings time levels the field for Alaskans. We were forced to make a time change in 1983 but because daylight savings time was in effect, we were able to enjoy summer light until 9:30PM. If we get rid of daylight savings time, we will have daylight from 3AM until 8:30 AM in the summer months. This will negatively impact our fishing and tourism industries. Southeast has seen a decrease in population due to changes in economics. This will further damage our communities. Please stop HB 19.

Kathi and Doug Riemer

Doug Riemer
Nordic Air, LLC
907 772-3535
nordicair@gci.net

Christina Apathy

From: Ethel Smith [lethaleethel@gmail.com]
Sent: Sunday, March 28, 2010 1:05 PM
To: Sen. Donny Olson
Subject: HB 19

Dear Sir/Madam,

I am writing in reference to HB 19.

The main reason this bill is a bad idea for all Alaskans is that Alaska is already 4 hours behind the east coast. If HB 19 passes we will be 5 hours behind the east coast from March to November. This will adversely affect business and travel. Many of us who live here are dependent on businesses in the lower 48. Several of us already go to work at 7 am and cannot communicate with our east-coast offices after noon. Those of us who travel for work know what 4-hour jet lag feels like in a meeting the next morning. Five hours will only be worse and will make the travel more difficult.

Many of us also have families "down south", who are already difficult to visit to because of long, expensive flights. Adding another hour or more to travel may mean that we need to spend more time in airports, use more vacation time (paid or unpaid), and possibly spend more nights in airports.

For those of us in southeast Alaska, it will result in the sun coming up around 1 am and going down around 9:30 pm on summer solstice. This will adversely affect jobs that depend on summer evening light – commercial fishing, construction, tourism, etc. More evening light in Alaska also means more people outside fishing, boating, and hiking, and more time for tourists to also do those things or stroll our streets and shop. Additionally having more daylight at the end of the day means children will more likely play outside after school. Research has shown that more available daylight in the evening does decrease the number of traffic accidents, traffic fatalities, and incidences of crime. Why should south central and western Alaska be the only beneficiaries of the summer-time light? Southeast Alaska already compromised on our summer evening light when they made one time zone for all of Alaska in 1983. Thank you for your consideration.

Sincerely,

Ethel H. Smith

Christina Apathy

From: Cynthia Wallesz [cynthia@eatalaskasalmon.com]
Sent: Tuesday, March 30, 2010 1:54 PM
To: Sen. Gary Stevens; Sen. Johnny Ellis; Sen. Con Bunde; Sen. Lesil McGuire; Sen. Bert Stedman; Sen. John Coghill; Sen. Hollis French; Sen. Linda Menard; Sen. Bettye Davis; Sen. Lyman Hoffman; Sen. Kevin Meyer; Sen. Joe Thomas; Sen. Fred Dyson; Sen. Charlie Huggins; Sen. Donny Olson; Sen. Tom Wagoner; Sen. Dennis Egan; Sen. Albert Kookesh; Sen. Joe Paskvan; Sen. Bill Wielechowski
Subject: HB19

Hello Senators:

I own a small fishing business in Petersburg where my husband and I fish for salmon and ship it fresh and frozen all around the country. While juggling our customer's orders I am constantly calculating how many hours ahead we are from this or that customer. I oppose eliminating daylight savings because I see only negative consequences to being yet another hour away (sometimes) from the rest of the country. Also, I appreciate currently being apart of daylight savings as it brings consistency with what most of the country lives by. Not participating in daylight savings makes Alaska that much more confusing to do business with as potential customers simply struggle to figure out which time zone we're on...we have enough challenges in the marketplace (such as logistics and transportation). Thank you for the work you do and for reading my thoughts on HB19. Please contact me if you want to discuss this further.

--Cynthia Wallesz

Cynthia Wallesz
Lofoten Fish Company
P.O. Box 2028
Petersburg, AK 99833
(907) 772-2680
(360) 201-7287-cell
www.eatalaskasalmon.com

Christina Apathy

From: chrystal.smith@gci.net on behalf of Chrystal Smith [chrystal.smith@gci.net]
Sent: Tuesday, March 30, 2010 2:32 PM
To: Sen. Donny Olson
Subject: Please Oppose HB 19 - Banning Daylight Savings Time

Dear Senator Olson:

Please oppose HB 19, which would end Daylight Savings Time in Alaska. Businesses, governmental entities, and individuals would all be negatively affected by passage of this bill.

I agree thoroughly with those who have expressed opposition to this bill (in legislative hearings and letters to the editor) and would mourn the loss of long summer evenings that are perfect for hiking, fishing, boating, or gardening. We Alaskans value our recreational pursuits and summer is an ideal time to make the most of our natural environment, particularly here in Southeast. Daylight Savings Time helps us do that, and banning it would negatively impact our leisure time.

However, ending Alaska Daylight Savings Time would have an even greater (and more important) impact on our state's businesses and governmental entities, most of whom have regular communication and interaction with suppliers and distributors, financial institutions, government agencies, and professional colleagues in other parts of the US. If Alaska does not have Daylight Savings Time, we will be one more hour behind all but minute areas of the rest of the US, Canada, and, indeed, the entire northern hemisphere. Investors who count on their connections to Wall Street will be five hours behind the East Coast instead of four; government employees or other citizens who need to consult with colleagues in DC will have an hour less to conduct teleconferences, call congressional offices, or negotiate via phone with federal agencies; tourism companies or seafood distributors working with customers in Europe will be at an even greater disadvantage because of the added time differential; Alaska corporations with operations across North America or in Europe will face increased difficulty making personal connections during their working day. And just think of the impact on Alaskans' business and personal travel and on tourism if Alaska is two hours behind Seattle, Los Angeles, or the Yukon.

I could give many more examples, but each of us can recall the difficulty (at work or home) of being as much as four hours behind the rest of the country. Just imagine how much harder it would be if yet another hour were added! Please make sure that HB 19, now in front of the Senate Community and Regional Affairs Committee (with further referrals to Labor & Commerce and Finance) does not pass.

Thank you for your service to Alaska.

Chrystal Smith

Juneau

523-4974

**Petersburg Legislative
Information Office
State of Alaska
Legislative Affairs Agency**

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Petersburg_lio@legis.state.ak.us
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FAX TRANSMISSION

TO: Senate Community & Regional Affairs
FAX: 907.465.4821
PHONE: 907.465.3707

DATE: 3.30. 2010

1 page to follow this cover. Written comment for HB 19: Eliminate Daylight Savings. Please provide it to all SCRA Members and enter it into the Bill record.

Thank you,



Ellen Rojcewicz
Petersburg LIO

Regarding HB 19

I live in Petersburg and I work in the medical field. The time change process every 6 months is a nuisance for us just like everyone else in the state, and I have often thought it would be a good idea if we would just hold one time all year round. After thinking about this a bit more, I realize that there are several advantages to keeping Daylight Savings Time.

If we don't change our clocks, we are 1 hour different from the West Coast, and 4 hours from the East Coast. With HB 19, there will be a 6 months period when we will be 2 hours and 5 hours different respectively. So, for example in April, if we didn't spring forward, if the Anchorage time is 1:00 pm, the east coast is time is 6:00 pm. In terms of banking, commerce, trade, and health care, maybe this isn't such a good idea. If I need to speak to an expert about a vital piece of medical equipment that isn't working properly, I may have to deal with an answering machine instead of a live person, resulting in a delay that will potentially delay critical laboratory results. That may not mean much to you, but to the 7 day old infant, that might be a bit of a problem. Minutes and hours are critical!

Alaska is blessed with long summer days. These days need to extend into the evening when we can all enjoy the bounties of summer. If HB 19 passes, then hard earned summer nights will be shortened. I put my time in the winter here so I can enjoy every minute of daylight in the summer. I don't want to have to get up at 3am to make my days longer. Now, up in the interior, these lost hours are not as much an impact as they would be for us in Southeast Alaska. Is SE Alaska the red headed step child of the legislature?

I have an aunt that lives in Florida. I have a hard time calling her after work because she goes to bed at 9:00. I get off at 5:00, 10 pm her time. And when I get a call at home from someone in the lower 48 and they don't know the time difference, I might be woken up at 4 am or earlier!

One more consideration: what will it cost to update software worldwide to accommodate HB 19? If we are doing international business overseas, how do we and our business partners keep time zones straight?

Maybe the time has come to eliminate Daylight Savings time across the nation, but then this should be standardized across the country, not a patchwork of various time zones across our great nation.

Please do not vote for HB19.

Elizabeth Bacom
PO Box 683
Petersburg, AK 99833
907-518-0808

Christina Apathy

From: Megan & Walter C. Pasternak [mwpstnk@ptialaska.net]
Sent: Wednesday, March 31, 2010 11:29 AM
To: Sen. Donny Olson; Sen. Joe Thomas; Sen. Albert Kookesh; Sen. Linda Menard; Sen. Hollis French; Sen. Bert Stedman; Rep. Peggy Wilson
Subject: Re: HB 19

Dear Members of the Senate Community and Regional Affairs Committee and Sen. Bert Stedman and Rep. Peggy Wilson: I am writing to express my adamant opposition to passage of HB 19 which would eliminate daylight savings time in Alaska and place the entire state two time zones away from Seattle in the summer and one zone away in the winter. As you all know, Alaska has strong ties to the Pacific Northwest both commercially and through families.

The discrepancy between summer and winter would be difficult for Outside entities to have to keep track of. The time system we have in place now, since uniting the state into one zone in 1983, has been working very well. Moving us an hour later in the summer would put hardships on those needing to contact others during business hours. The bigger the discrepancy, the narrower the window we would have to contact those outside the state unless we change our working hours to very early in the morning. It is hard enough now, being four hours different from those on the East Coast.

Long summer evenings have always been a large and important part of life in Alaska. Many of our activities and means of making a living are based on those hours. Subsistence food gathering often takes place after work hours along with recreational opportunities like fishing, clam digging, berry gathering, hiking, walking, biking and playing organized sports like softball and Little League for both adults and children alike. Having it lighter in the very early morning hours would do nothing to help Alaskans get their much needed outdoor-based exercise, leading to even more obesity in our society.

Morning darkness is much more favorable than evening darkness, especially in the winter months. It is better for one's mental health and safety.

The effects on the broadcast industry, upon which the highly rural Alaska relies heavily, would also be disruptive and detrimental.

Please do not let this bill get any further in the legislature. It will do no one any good.

Thank you.

Megan Pasternak
Box 830
Sitka, AK 99835
907-747-5943

Christina Apathy

From: Dave Harris [dkh@gci.net]
Sent: Friday, April 02, 2010 6:25 AM
To: Sen. Donny Olson
Subject: daylight savings time

Hello,

I wanted to let you no that I do not support the daylight savings bill I hear is slipping through. Putting us further away from the west coast is not a good idea for business operations, and more importantly to me, as a resident of Southeast, we will lose a precious hour of light in the evening. Please reject this idea as it can only be based on the laziness of some, and will significantly hurt our quality of life here.

Thanks you for our time,

Dave Harris
Juneau, Alaska

Christina Apathy

From: jkna parise [jknparise@hotmail.com]
Sent: Friday, April 02, 2010 9:17 AM
To: Sen. Donny Olson
Subject: Daylight Savings Time

Senator Olson,

I am the Director of Fixed Income Investments for the Alaska Permanent Fund. I am not writing as a representative of the APFC but as an Alaska citizen. Currently, I work New York hours because we must be present during market hours to effectively manage the \$7+ billion bond portfolio. As you can imagine, running a portfolio in Alaska presents some challenges and one of them is the time difference between us and NY. Adding an additional hour during the summer would only make matters worse and add additional confusion for our business contacts. It will also make staffing of investment professionals more difficult because of the stress on their families. On a personal note, I already wake up before 4:00 am to come to work and miss some of the evening with my family because I have to go to bed early for work. Coming into work an hour early would be a hardship on myself and family and severely reduce my quality of life in Alaska. Also, our parents live on the East Coast and this bill would make it even worse than it already is to communicate with them. I understand the hardships this bill would cause people but I don't understand how it benefits Alaska to be even further away from the rest of the country. Thank you for your help.

Jim Parise
Juneau
907-790-1057

The New Busy is not the old busy. Search, chat and e-mail from your inbox. [Get started.](#)

Christina Apathy

From: Tyron Walker [TYRONW@city.ketchikan.ak.us]
Sent: Saturday, April 03, 2010 12:10 AM
To: Sen. Donny Olson
Subject: Oppose HB 19, Daylight Savings

Senator – I cannot express how apposed to HB 19, (ending daylight savings) I am. It amazes me that with all the more important issues facing the state, the legislature has taken the time to even contemplate this bill.

If this bill were to pass I see it as an example of alienating an entire region of the state. Myself and what I estimate to be the 100,000 other residences in Southeast enjoy the extra hour of daylight we get in the evening as a result of daylight savings. Due to our latitude we do not get the 20+ hours of daylight the rest of the state enjoys during the summer.

By not maintaining daylight savings with the rest of the country we would be 2 hours different than our major business partner; Washington State during half the year. This causes a major inconvenience. 20 some years ago when the legislature moved to “Alaska time” we in Southeast lost an hour of daylight. This bill would cause us to loose another.

Because of our longitude, we in Southeast should be on “Western time zone”. This bill would move us to “Hawaiian time zone”. This is not fair.

Please do not vote for this bill.

Sincerely, Ty Walker
61 Clover View Rd.
Ketchikan, AK 99901

Christina Apathy

From: WILLIAM JOHNSON [wfj@gci.net]
Sent: Sunday, April 11, 2010 12:26 PM
To: Sen. Donny Olson
Subject: PLEASE retain daylight savings time - sink HB19

Dear Senator,

My work requires frequent communication with other U.S. time zones, particularly with Washington, D.C. It is frequently difficult to arrange conferences and phone calls among multiple parties in places four hours away. It would be horrible to try this when it's five hours away. This, coupled with the issue of our time difference sometimes being X hours and other times being X+1 hours (or is it X-1 hours?) depending on the date, will further impede business with my clients, vendors, and colleagues.

I urge you to bury the dreadful idea of altering daylight savings time and keep our time zone synchronized with the rest of the world.

Sincerely,
William Johnson
1075 Fritz Cove Road
Juneau, AK 99801

Christina Apathy

From: Marty D. Laudert [MDLaudert@gvea.com]
Sent: Thursday, March 18, 2010 9:23 AM
To: Sen. Donny Olson
Subject: HB-19

Please do not eliminate daylight savings time. It works very well just the way it is. The extra hour in the evening during spring and fall is ideal for the true Alaska lifestyle. I use this hour of daylight for various outdoor activity after my 8-5 workday.

Thank you

Marty Laudert
3238 Edby Rd
Fairbanks AK 99709
1 907 750 1953

Christina Apathy

From: Cheryl A. Laudert [CALaudert@gvea.com]
Sent: Thursday, March 18, 2010 8:55 AM
To: Sen. Donny Olson
Subject: daylight savings
Attachments: image001.gif

Leave daylight savings the way it is today. Light in the evening in the fall is most valuable to me and my family.

Christina Apathy

From: Jim [jimer53@starband.net]
Sent: Thursday, March 18, 2010 9:15 AM
To: Sen. Albert Kookesh; Sen. Joe Thomas; Sen. Hollis French; Sen. Linda Menard; Sen. Donny Olson; Rep. Beth Kerttula; Rep. Cathy Munoz
Subject: Testimony concerning HB19

Dear [Senator Albert Kookesh@legis.state.ak.us](mailto:Senator_Albert_Kookesh@legis.state.ak.us);

[Senator Joe Thomas@legis.state.ak.us](mailto:Senator_Joe_Thomas@legis.state.ak.us);

[Senator Hollis French@legis.state.ak.us](mailto:Senator_Hollis_French@legis.state.ak.us);

[Senator Linda Menard@legis.state.ak.us](mailto:Senator_Linda_Menard@legis.state.ak.us);

[Senator Donald Olson@legis.state.ak.us](mailto:Senator_Donald_Olson@legis.state.ak.us)

[Representative Anna Fairclough@legis.state.ak.us](mailto:Representative_Anna_Fairclough@legis.state.ak.us)

Quote : [Link here](#)

"On September 15, 1983, Secretary Elizabeth Dole signed a plan to reduce the number of time zones in Alaska from four to two; two weeks later, the plan became effective.

The shift was made to facilitate doing business in Alaska, improve communications, and unify residents".

In 1982-3 there were a bunch of us who were against this decision to change our time zone to Alaska time but nobody listened; the time zones were change anyway. A group from Juneau said what is quoted above, "improve communications, and unify residents" which interpeted as and actually meant, "Save the Capital for Juneau".

So are we still unified or what?

This desire to drop daylight saving time is just a front for people who do like the time zone they are in. I too have a heavy dislike for our time zone changes and would like it to be changed back to pre-1983 or back to Pacific time (in Southeast Alaska) and let Anchorage and other disgruntled areas do what's best for them all under a Federal decision. Dropping daylight saving would effectively edge them towards their proper zone west of Southeast Alaska but is not the way to acomplish this fairly for all Alaska residents concerned.

I understand what the western areas of Alaska must feel when the sun is still set at the noon but "rob peter to pay paul" is not right. Doing away with Daylight saving time would further push Southeast away from our desire clock hour or 2 hours away from Pacific time in the summer. I like many others enjoy our daylight time after work etc.

There is a better way to do this. PLEASE petition the Federal Government to let us go back to the way it was (pre 1982) so we can all stop our dislike of the time zones we are now in. Otherwise, leave it alone.

Sincerely,

James Erickson

District C

Hoonah, Alaska

Christina Apathy

From: chilcoot2@gmail.com on behalf of Craig Wm. Black [chilcoot@mtaonline.net]
Sent: Thursday, March 18, 2010 11:09 AM
To: Sen. Donny Olson
Subject: Repeal Daylight Time, But Not Via Rep. Fairclough's Bill

Dear Senator Olson,

I write today to let you know I join in Rep. Fairclough's goal of repealing daylight savings time. However, I disagree with her plan to have Alaska do so by itself.

I urge you to support HRJ20, which urges Congress to get rid of DST nationally. But I urge you to oppose HB19, which would have Alaska go it alone.

I am a sports fan. NFL, Major League Baseball, NHL, the biggies. As things are right now, it's hard to follow sports in Alaska, since so many games are well underway (if not over) by the time working stiffs like me get home from work to watch.

If Alaska repeals DST, the first 10 weeks of Sunday's NFL slate will begin at 8:00 AM rather than the current 9:00 AM. That's too early!

To watch a weeknight Mariner home game, I'll need to be home by first pitch at 5:00 PM. The World Series will start at 3:15 PM. It's crazy.

Factor in the hassle of Alaska sometimes being 2 hours behind the west coast most of the year but 1 hour behind during the winter, we'll have a lot of headaches trying to coordinate activities with people elsewhere. To what end?

I agree that DST serves no purpose in Alaska. But it also serves no purpose anywhere else. We should work with our Congressional delegation to come up with a national fix. HJR20 would give our delegation the encouragement to do what's right for the nation AND Alaska.

So we need to be smart about killing DST. That's this sports fan's view.

Sincerely,

Craig Black
20620 Ptarmigan Blvd.
Eagle River, AK 99577
(907) 696-6699
chilcoot@mtaonline.net

Christina Apathy

From: Dick [hockref@acsalaska.net]
Sent: Thursday, March 18, 2010 11:26 AM
To: Sen. Donny Olson
Cc: Sen. Joe Thomas; Sen. Hollis French; Sen. Albert Kookesh; Sen. Linda Menard
Subject: HB19

Please put me down for keeping daylight savings time!

As a retired educator, I have watched children come to school in the dark and leave in the dark during our winter months. With DST, they are able to leave school with some daylight left. If we are going to do anything with DST, we should go on DST permanently ALL YEAR LONG!!!!

Then at least school children and many employed people would have a little daylight to enjoy on their way home. We would also enjoy the benefit of being more in sync with the rest of the U.S.. Being on the same time as Seattle or the west coast when they are off DST would benefit many businesses as well.

So please either kill this bill or go on DST all year long. Being on DST all year long should satisfy Rep. Fairclough reasons for changing our present system.

Thank you for your work.

Richard Waisanen
Soldotna

VIKING TRAVEL, INC.

David Berg, President
101 N. Nordic Drive
P.O. Box 787
Petersburg AK 99833

www.AlaskaFerry.com

Phones: 800.327.2571

907.772.3818

Fax: 907.772.3940

E-Mail: david@AlaskaFerry.com

Monday, March 15, 2010

Senate Community and Regional Affairs
FAX 907-465-4821

Subject HB19

SCRA Chair, Senator Donald Olson;
Vice-Chair, Senator Joe Thomas;
Member Senators Hollis French, Albert Kookesh and Linda Menard.

Ladies and Gentlemen:

We oppose the change of our present daylight time system and schedule.

If daylight savings time was dropped, our Southeast Alaska morning sunrises would happen earlier (2:50AM on June 21st) and sunsets earlier, therefore shortening our apparent active day.

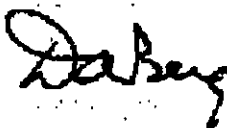
In addition, the change of the rest of the country to daylight time would set us off from their regular time changes.. part of the year we'd be one hour from Pacific Time, and the rest of the year two hours from Pacific time.

Time Zones are confusing enough for residents and travelers alike.

Proponents complain that daylight time is not needed. Well, it may not be required, but would sure confuse the rest of the world. In addition, in Alaska, one may use blackout shades or other devices to keep sunlight out of rooms when sleep is a priority.

Let's stay with our present system and drop ideas like this that waste our time when there are other pressing items to deal with during our legislative session.

Best regards,
Viking Travel, Inc. and David and Nancy Berg



David A. Berg
President

HB 19 - Log

3/18, 11am - Allan Barnes from Anchorage called regarding HB 19. He is against the Daylight Savings Bill. "Leave well enough alone."