ALASKA COOK INLET
BELUGA AREA
RESOURCE DEVELOPMENT

SYNTHETIC GAS FROM COAL & BIO-MASS
FOR ELECTRIC POWER GENERATION
FOR F-T TRANSPORTATION FUELS
ENHANCED OIL RECOVERY (EOR)
WHILE SEQUESTERING CO_2

POSITIVE CHANGES FOR THE PEOPLE & REGION

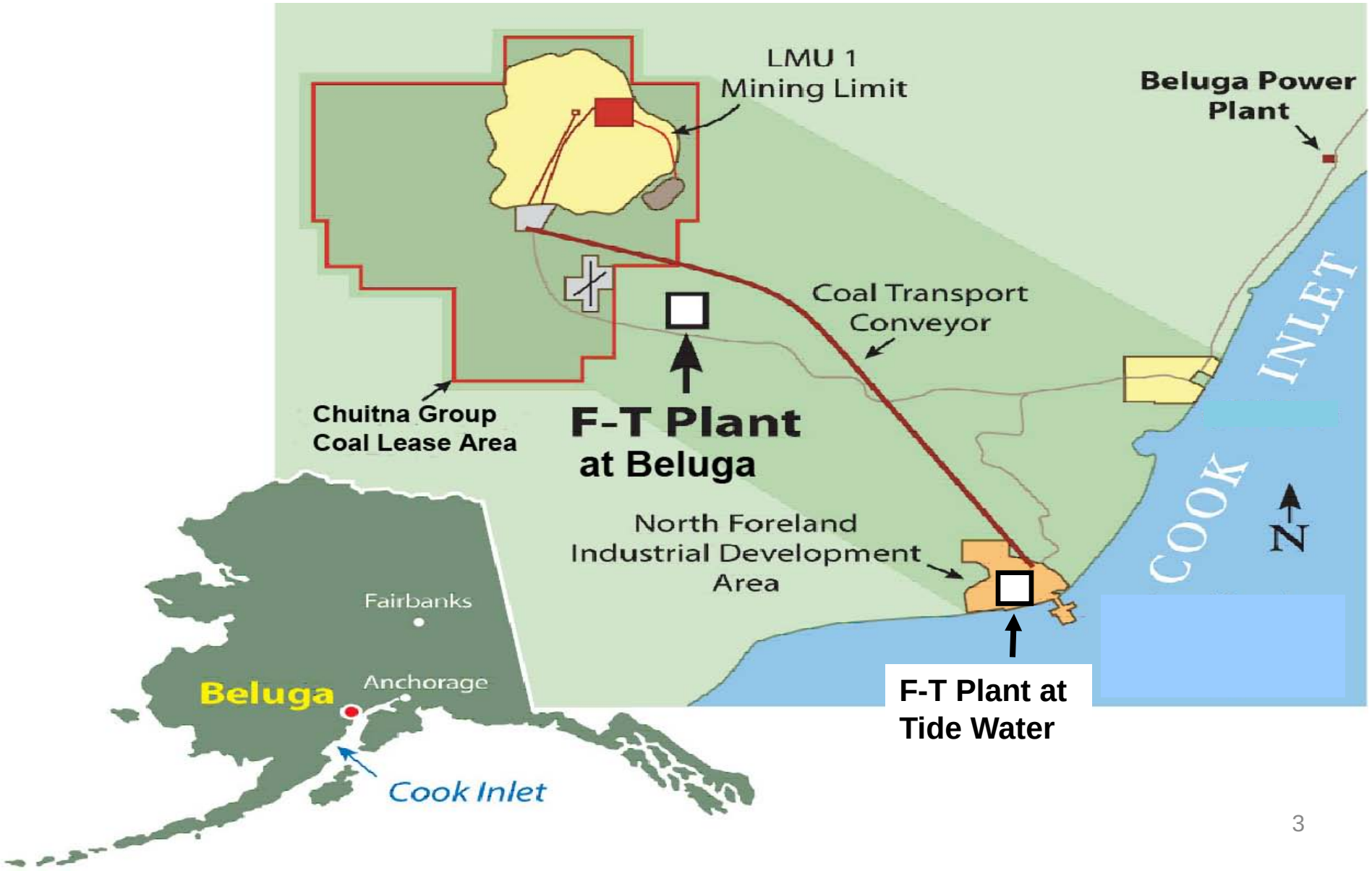
March 12, 2009

ALASKA BELUGA CTL THE BEST - LOCATION

- Long term Federal support for CTL - *$500 million/yr*
- Access to local natural resource (coal) *17 million tons/yr*
- Access to unlimited cooling water *Cook Inlet – no fresh water*
- Access to electric power grid *makes 200 to 400 MW of power*
- Access to natural gas system *can make synthetic pipeline gas*
- Access to skilled labor *1,600 direct jobs – 7,000 indirect*
- Access to export markets *no negative impact on local refinery*
- Access to proven CO_2 sinks ? *Depleted oil and gas reservoirs*
- Tide water location reduce capital costs *$12 billion CAPEX*
- Local markets that need the same products *jet fuel*
- Local fuel storage allows for fuel supply competition-lower costs

80,000 bbl/d Coal To Liquids "Beluga CTL Plant"

(Mine Mouth or Tide Water)



WHAT DOES 1.3 BILLION TONS OF WEST COOK INLET COAL REPRESENT

- 2 BILLION BARRELS OF FUELS
  - The SASOL F-T process will turn 1 ton of West Cook Inlet coal into 1.5 barrels of product
  - 1.5 barrels x 1.3 billion tons =

    2 billion barrels of fuels

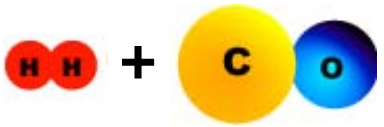
BILLIONS OF TONS OF BELUGA COAL

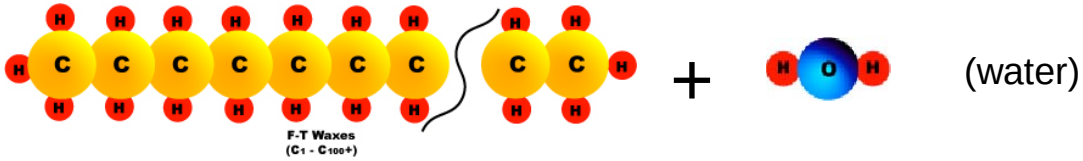
EQUALS

BILLIONS OF BARRELS OF F-T FUELS

Three Steps in CTL/BTL/GTL Refining to make F-T Fuels

CTL/BTL/GTL Processes use 3 distinct steps, all commercially proven to convert a gas, liquid or solid into synthetic transport fuels:

- Step 1 - Syn-Gas generation (H_2 & CO) 
- Step 2 - The F-T reaction (long paraffin chains ➡ wax)



- Step 3 - Product upgrading (hydrocracking of the long chain F-T paraffin to produce the desired end product – similar to a crude oil refinery)
  - Kerosene – Diesel – Gasoline - Jet Fuel – Naphtha

C_{10}-C_{13} C_{14}-C_{20} C_5-C_{10} C_{10}-C_{13} C_4-C_{10}

THE F-T PROCESS IS COMMERCIAL

South African Secunda 150,000 BPD Coal to Liquids (CTL)

South African Mossgas 47,000 BPD Gas/Condensate to Liquids (GTL)

Shell Bintulu 15,000 BPD Gas to Liquids (GTL)

CHOREN Freiberg 500 BPD Biomass to Liquids (BTL)

SYNTHETIC DIESEL

F-T DIESEL
AS CLEAN AS CNG

U.S. EPA* APPROVED

NON-TOXIC

U.S. FDA APPROVED

ZERO SULFUR

ZERO AROMATICS

70 + CETANE

PM10 ≤ CNG

*EPA Water Docket, EB 57 located at 401 M Street SW Washington DC, 20460 Reference Docket No. W-98-26 in UNOCAL data file 4.A.a.3, Vol 13

COOK INLET OIL & GAS FACILITIES

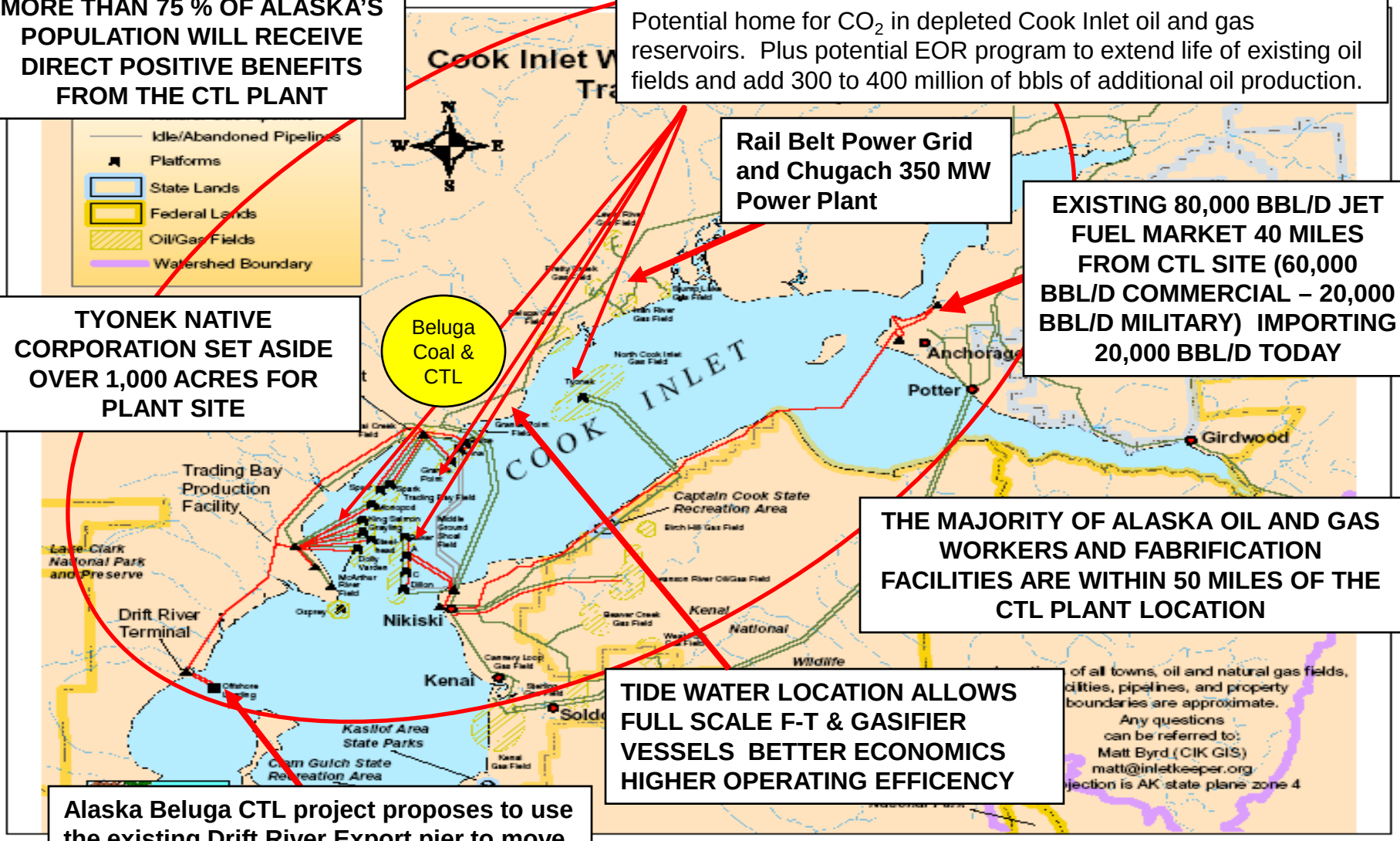
MORE THAN 75 % OF ALASKA'S POPULATION WILL RECEIVE DIRECT POSITIVE BENEFITS FROM THE CTL PLANT

Potential home for CO_2 in depleted Cook Inlet oil and gas reservoirs. Plus potential EOR program to extend life of existing oil fields and add 300 to 400 million of bbls of additional oil production.

Rail Belt Power Grid and Chugach 350 MW Power Plant

EXISTING 80,000 BBL/D JET FUEL MARKET 40 MILES FROM CTL SITE (60,000 BBL/D COMMERCIAL – 20,000 BBL/D MILITARY) IMPORTING 20,000 BBL/D TODAY

TYONEK NATIVE CORPORATION SET ASIDE OVER 1,000 ACRES FOR PLANT SITE



THE MAJORITY OF ALASKA OIL AND GAS WORKERS AND FABRIFICATION FACILITIES ARE WITHIN 50 MILES OF THE CTL PLANT LOCATION

TIDE WATER LOCATION ALLOWS FULL SCALE F-T & GASIFIER VESSELS BETTER ECONOMICS HIGHER OPERATING EFFICENCY

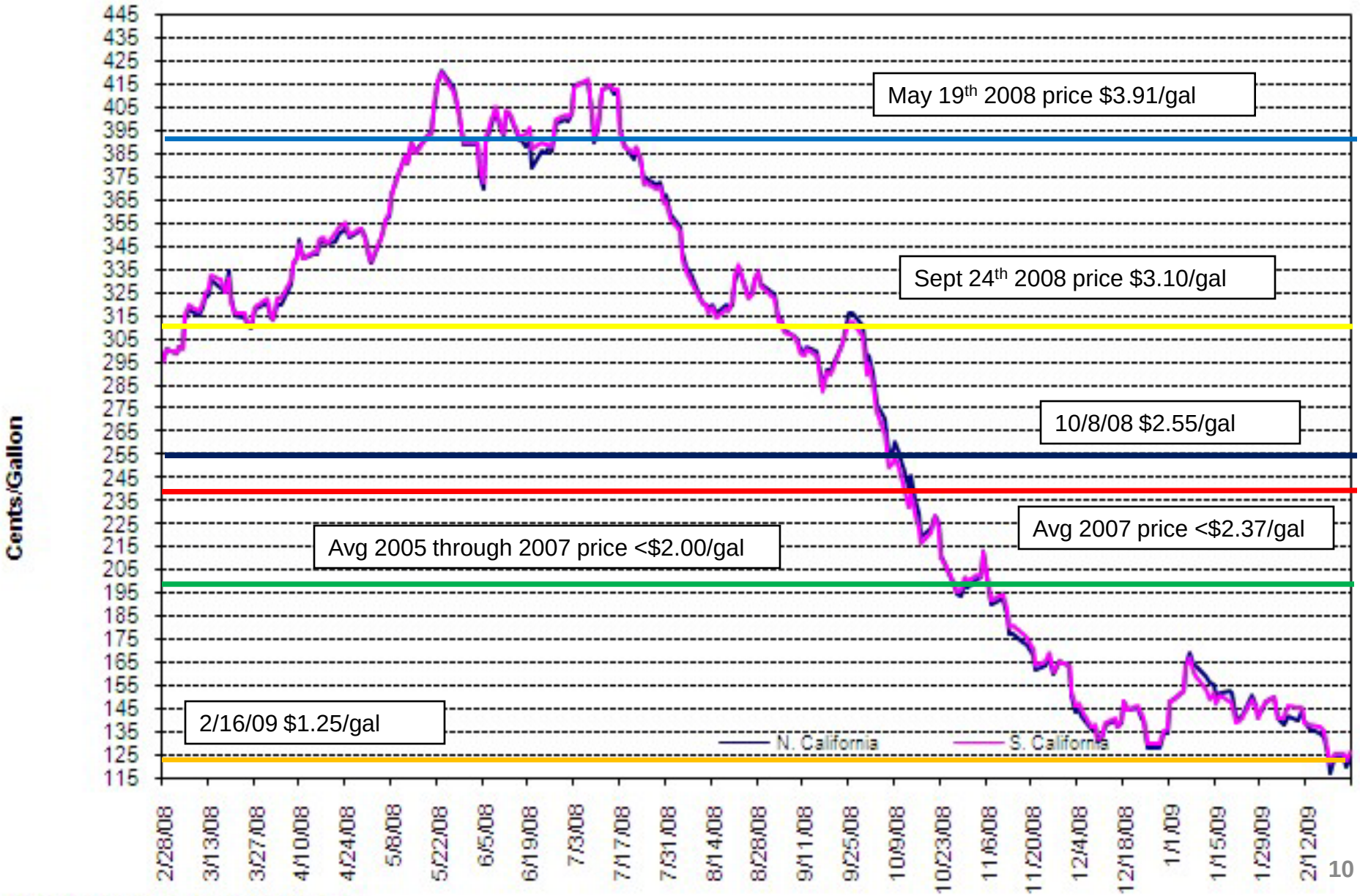
Alaska Beluga CTL project proposes to use the existing Drift River Export pier to move F-T products to US and Asian markets

COOK INLET TIDE WATER LOCATION

42” Diameter, 180’ Tall, can only be delivered via ship/barge at a tide water location

Drift River Export Terminal - no ice issues
no new piers to permit

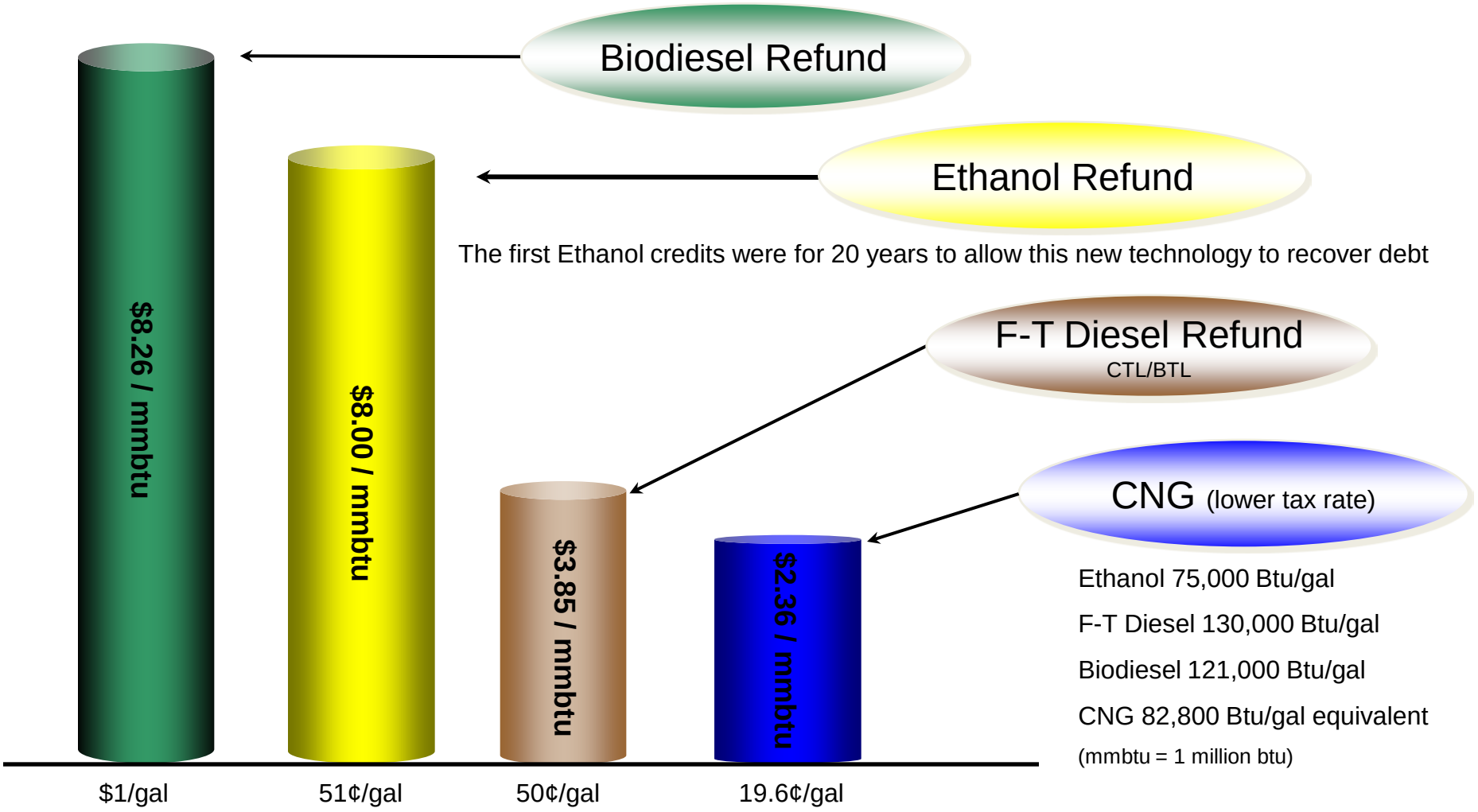
CARB Diesel Fuel Average Rack Prices
(As of 2/25/09)



Source: Oil Price Information Service

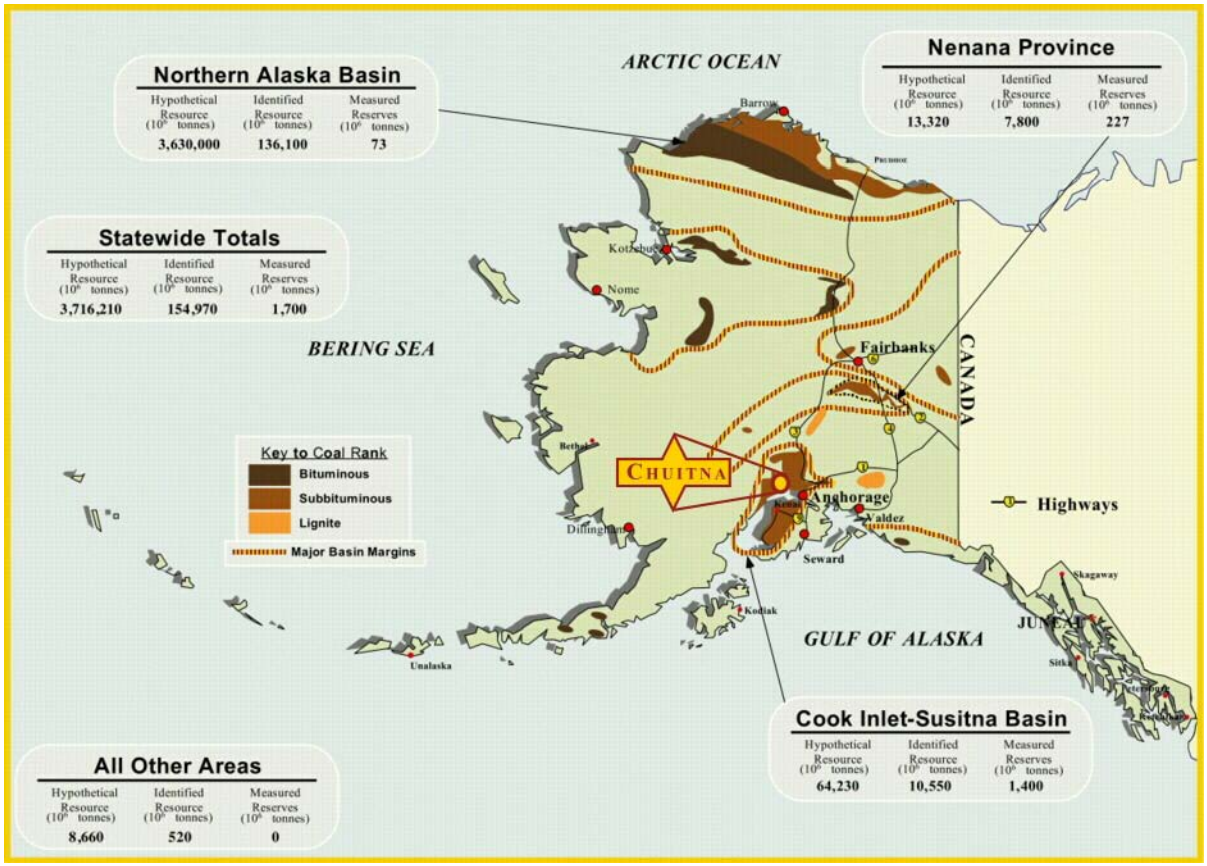
Energy Credits for F-T Fuels (CTL - BTL)
On a $/million btu basis vs Biodiesel & Ethanol

(At the Federal level only)



Energy Credits that F-T Diesel receives is less than half the Energy Credit of Biodiesel & Ethanol on a $/million btu basis

THINK OUT SIDE OF THE BOX
Alaska's Coal Resources & Reserves



ALASKA LEGACY PROJECT

Estimated Recoverable Coal Reserves

(10^9 tonnes)

World Total	**1,038**
North America	**256**
United States	**246+Alaska**
Alaska (measured)	**2**
Alaska Estimated	**200**
CHUITNA (measured)	**>1**

Note: The Northern Alaska Basin could potentially have upwards of 1.5 to 2.5 trillion tons of bituminous coal reserves – more coal than the total proven reserves in the world today!

FEAR OF CARBON EMISSIONS BIGGEST OBSTACLE TO ALASKA CTL

- IS EXPORT THE ONLY WAY TO AVOID CARBON CAPTURE OR SEQUESTERING?
- OBAMA ADMINISTRATION DISCUSSED CAP & TRADE COULD COST BELUGA CTL PLANT $180 million/year
- "IS ANTHROPOGENIC GLOBAL WARMING (now called Climate Change) FACT OR FICTION"?
  - Are you a Global Warming Extremist or Global Warming Skeptic?
- GOVERNOR SIGNS AGREEMENT WITH THE CENTER FOR CLIMATE STRATEGIES (CCS)
  - CCS SAYS NO DEBATE ON CLIMATE CHANGE ALLOWED

PEOPLE SAY
THERE IS NO SUCH
THING AS CLEAN COAL
TECHNOLOGY

THEY ARE
MISS-INFORMED

THEY DON'T UNDERSTAND THE DIFFERENCE BETWEEN GASIFICATION WITH CAPTURE, I.E.

BTL - CTL - GTL also called F-T

or

GASIFICATION WITHOUT CAPTURE
Integrated Gasification Combined Cycle (IGCC)

AND WORSE YET
THEY LOOK AT COMBUSTION WITH SCRUBBERS AND THINK THIS IS THE BEST THERE IS

WE NEED TO EDUCATE THEM

See http://www.youtube.com/watch?v=w5Y1w7708qc or

http://www.gasification.org/media/videos.aspx

CTL is really clean coal technology because all of the impurities listed below if present are captured and disposed of:

Impurities that are removed from Syngas before it enters the F-T reactor in step two. This is the main reason F-T fuels cost so much and are so clean

- **CO_2**
- Catalyst Poisons:
  - H_2S
  - COS
  - HCN
  - HCl
  - $Fe(CO)_5$
  - $Ni(CO)_4$
  - Hg
  - Traces of Cd, Se and other metal vapors

CO_2 IS NOT A POLLUTANT !

WITHOUT CO_2 LIFE AS WE KNOW IT WOULD BE ENDED

IT HAS BEEN SHOWN THAT WITH THE INCREASE IN ATMOSPHERIC CO_2 WE ARE GREENING THE EARTH

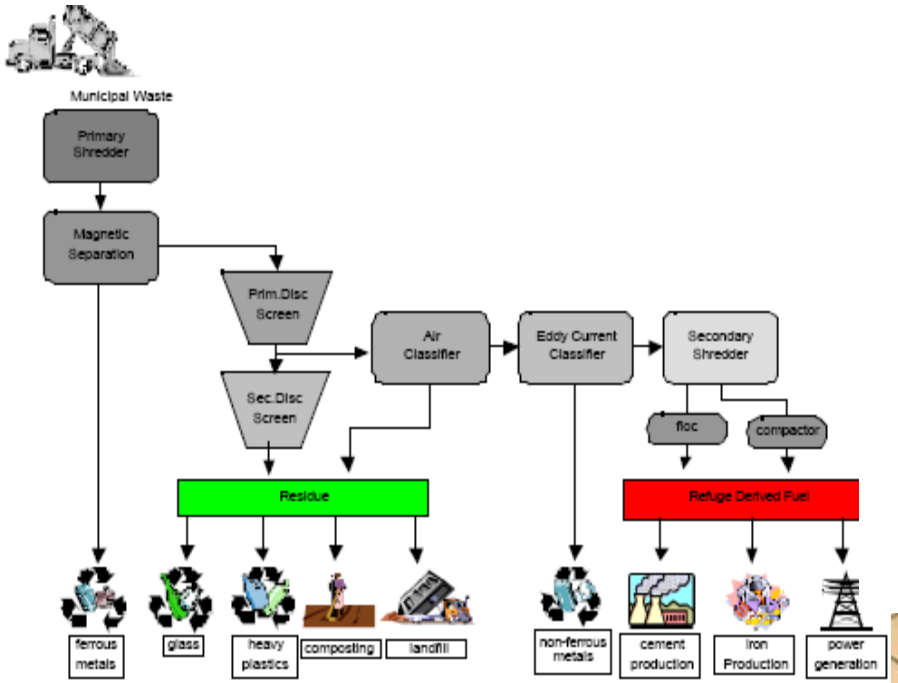
CURRENT ESTIMATES ARE THAT THE EARTH HAS INCREASED PLANT GROWTH BY 15%

LOWERING CTL'S CARBON FOOTPRINT

MSW – RDF

A SECOND RESOURCE TO MAKE F-T FUELS AT THE TYONEK PLANT SITE

TYPICAL RDF FACILITY



RDF Production Facility

THE BELUGA CTL PROJECT REPRESENTS VALUE ADDED

LETS ASSUME THAT YOU WANT TO SELL / EXPORT 52,000 T/D OF LOCAL COAL RESOURCES

IF YOU DEVELOP THE COAL RESOURCE FOR EXPORT THEN 19 MILLION TONS /YR ARE EXPORTED TO CHINA

- 52,000 t/d coal sold @$25/ton = $475 million/yr
  - $600 million CAPEX Mine and Export Terminal
  - 200 jobs in a camp setting

- GREAT FOR CHUITNA or is it **CH**U**I**T**NA**
  BUT WHAT ABOUT ALASKA?

THE BELUGA CTL PROJECT REPRESENTS VALUE ADDED

IF YOU BUILD A CTL PLANT & USE THE SAME VOLUME OF COAL

- 84,000 bbl/d of F-T Products @ $2.5/gal = $3 billion/yr
  - $12.8 billion CAPEX CTL Plant and Mine
  - 1,600 + Permanent Direct Jobs at Mine and CTL Plant
  - 5,000 + Indirect Jobs supporting the CTL Project
  - Over 5,000 + during construction (3 to 5 years)
- 350 + Million Barrels of EOR Crude Oil
  - $6 billion in State Royalty/PPT income ($70/bbl crude)
- 350 – 500 MW of Low Cost Waste Heat Electricity
  - $1.4 to 2.0 billion in rate payer savings over 15 yrs (3¢/kw savings)

BETTER FOR ALASKAN's!

THANK YOU