



Alaska Energy Authority

Sara Fisher-Goad, executive director
House Finance DCCED Subcommittee
Feb. 10, 2016

Alaska Energy Authority: Mission

“To Reduce the Cost of Energy in Alaska”

- AEA is an independent and public corporation of the State of Alaska
- Created by the Alaska Legislature in 1976
- 44.83.070: “ The purpose of the Authority is to promote, develop, and advance the general prosperity and economic welfare of the people of the state by providing a means of financing and operating power projects and facilities that recover and use waste energy and by carrying out the powers and duties assigned to it under AS 42.45.”

Focusing on Communities



- AEA Core Competencies: energy policy, lowering energy costs, rural energy systems and the integration of renewables
- Emphasizing community-based approach to projects
- Technical assistance, regional planning and project management
- Provide synergy between planning, projects and funding sources
- Assist communities to move to project-ready status



Building Blocks of AEA



The Building Blocks of AEA

Programs

Circuit Rider Assistance
Community Assistance
Emergency Response
Emerging Energy Technology Fund
Energy Efficiency and Conservation
Power Cost Equalization
Power Project Loan Fund
Regional Energy Planning
Renewable Energy Grant Fund
Utility Training (Power Plant and Bulk Fuel Operator, Hydro Operator)

Projects

Alaska Affordable Energy Strategy
Biomass
Bulk Fuel Tank Farms
Combined Heat and Power
Energy Efficiency
Geothermal
Hydroelectric
Ocean and River
Rural Power Systems Upgrades
Electrical Distribution
Solar
Wind

AEA-Owned Infrastructure

Bradley Lake Hydro
Alaska Intertie
Susitna-Watana Hydro (*authorized*)

FY2017 Operating Budget *(in thousands)*

Statewide Project Development, Alternative Energy and Efficiency

Alaska Affordable Energy Strategy
Biomass
Combined Heat and Power
Emerging Energy Technology Fund
Energy Efficiency and Conservation
Geothermal
Hydroelectric
Ocean and River
Regional Energy Planning
Renewable Energy Grant Fund
Solar
Wind
Susitna-Watana Hydro

Unrestricted GF	\$619.4
Designated GF	\$2,207.7
Other State Funds	\$3,499.5
Federal Receipts	\$41.9

Rural Energy Assistance

Bulk Fuel Tank Farms
Community Assistance
Circuit Rider Assistance
Emergency Response
Electrical Distribution
Power Project Loan Fund
Rural Power Systems Upgrades
Utility Training (Power Plant and Bulk Fuel Operator, Hydro Operator)

Unrestricted GF	\$1,413.0
Designated GF	\$1,095.5
Other State Funds	\$2,841.7
Federal Receipts	\$445.0

AEA-Owned Facilities

Bradley Lake Hydro
Alaska Intertie

Unrestricted GF	\$0.0
Designated GF	\$0.0
Other State Funds	\$981.7
Federal Receipts	\$0.0

Power Cost Equalization

Power Cost Equalization

Unrestricted GF	\$0.0
Designated GF	\$40,355.0
Other State Funds	\$0.0
Federal Receipts	\$0.0

AEA: State Energy Office



- Develop state energy policy and plans
- Official representation of the National Association of State Energy Offices
- Tracking progress on energy goals, maintaining consistency with state policies
- Multi-agency and entity collaborations
 - AHFC, RCA, DEC, Denali Commission, USDOE
- Capitalize on collaborative opportunities and leverage federal funds

Rural Energy Systems

- AEA serves rural Alaska from planning to construction of energy systems; power house training; ongoing technical assistance and emergency response.



Integration of Renewables

- Through the Renewable Energy Fund and Emerging Energy Technology Fund, Alaska is leading the way on integrating alternative energy into small diesel microgrids.
- 30 Million gallons of diesel and equivalent expected to be displaced in 2016 by RE Fund projects.



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Wave and Tidal Power Hit First in Remote Communities


The still nascent technology to generate electricity from the sea may find its first economical uses far from the grid

ClimateWire

May 9, 2014 | By Julia Piper and ClimateWire

If you ask the people of Yakutat, Alaska, the best part about living in this small, remote town is the breathtaking natural beauty. The worst part is the price of electricity.

Yakutat's 1.5-megawatt electrical system is completely reliant on diesel fuel, which is delivered four times per year at a price of



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Geothermal Power in Alaska Holds Hidden Model for Clean Energy

At Chena Hot Springs Resort, a visionary owner and an ingenious engineer tap into one of the world's most overlooked energy resources—hot liquid fuels—to produce electricity, heat buildings and soon, they hope, generate hydrogen.

February 3, 2014 9:13 AM

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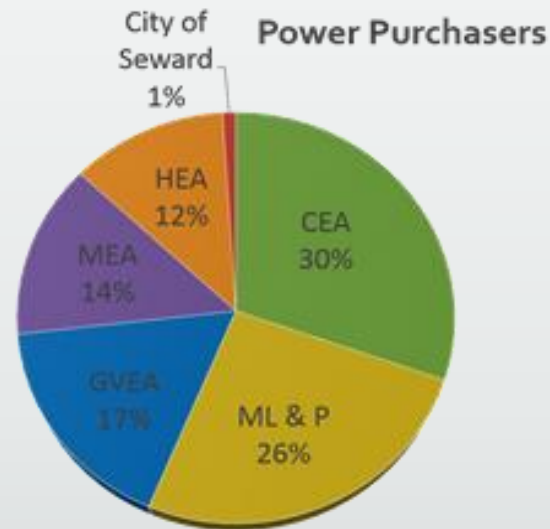
The whine of the power plant sounds like a jet engine as it roars through the turbine at the site. The wind whistles and whistles at the site. The wind whistles and whistles at the site. The wind whistles and whistles at the site.

Bring your ideas to Creator Space.



Owning Energy Infrastructure

- Bradley Lake Hydroelectric Project – provides lowest cost power in the Railbelt
- Intertie - saves Northern Railbelt households an average of \$1,000 annually



Financing Energy Infrastructure

- AEA has bonding authority and administers the Power Project Loan Fund
- AEA focus is shifting from grants to loans and providing technical assistance to rural communities and utilities to prepare for loans



Delta Wind Project, courtesy of Mike Craft



Atka Hydro



Genset - Newtok

AEA Power Project Loan Fund

Outstanding Loans & Loan Commitments at December 31, 2015

Borrower	Project Description	Outstanding Balance
Alaska Environmental Power, LLC	Wind Turbine purchase	1,818,565
Aleutian Wind Energy, LLC	Wind Turbine purchase	753,702
Arctic Village Council	Purchase/Overhaul/Evaluate gensets	100,000
City of Atka	Hydroelectric power system	648,493
City of Chefnak: Naterkaq Light Plant	Generator repair	23,063
City of Larsen Bay	Hydroelectric	213,000
City of Pilot Point	Powerhouse & Distribution Line Repair/Maintenance	247,969
Kwig Power Company	New Genset	300,640
Southfork Hydro, LLC	Hydroelectric construction project	2,047,136
Tuntutuliak Community Services Association	Replace 2 Powerhouse engines	168,000
		6,320,568
Pending Loan Commitments:		
Kwig Power Company	New Genset	99,360
Haida Energy, Inc.	Hydroelectric Project Construction	20,000,000
City of Pelican	Hydro - lower penstock stabilization	61,000
City of King Cove	Waterfall Creek Hydro	1,975,000
Ungusraq Power Company (Newtok)	Install New Diesel Genset/Repairs To Distribution System	232,000
		22,367,360

Lowering Energy Costs: Power Cost Equalization

- The PCE Endowment fully funds the program (\$0 GF) and administrative costs for AEA and the RCA
- Amount available for appropriation based on 7 percent 3 year monthly average market value is \$62.9 million
- The PCE Endowment's market value (12/31) was over \$935 million, Department of Revenue acts as fiduciary
- The PCE program provides reimbursements to eligible rural utilities and community facilities to equalize power costs to urban Alaska
 - The PCE base rate is \$0.1582 per kilowatt hour
 - Without PCE, many rural ratepayers would pay more than five times urban rates
- AEA assists utilities to become eligible for program (Total 193 eligible communities)

FY2017 Operating Budget *(in thousands)*

AEA Operating Components	FY2016 Mgmt Plan	FY2017 Adjusted Base	FY2017 Governor	Mgmt. Plan to Governor		Adj. Base to Governor	
				\$	%	\$	%
Owned Facilities	\$981.7	\$981.7	\$981.7	-	-	-	-
Rural Energy Assistance	\$5,902.7	\$5,746.0	\$5,795.2	-\$107.5	-1.8%	\$49.2	0.9%
Statewide Project Development, AEE	\$8,545.4*	\$6,723.5	\$6,368.5	-\$2,176.9	-25.5%	-\$355.0	-5.3%
Total (excluding PCE)	\$15,429.8	\$13,451.2	\$13,145.4	-\$2,284.4	-14.8%	-\$305.8	-0.6%

*Management plan includes multi-year authorization for of \$1,821.9 not reflected in adjusted base budget totals.

Funding Sources:							
Unrestricted GF	\$4,531.8	\$2,711.4	\$2,032.4	-\$2,499.4	-55.2%	-\$679.0	-25.0%
Designated GF	\$3,303.2	\$3,303.2	\$3,303.2	-	-	-	-
Other State Funds	\$7,322.9	\$7,322.9	\$7,322.9	-	-	-	-
Federal Receipts	\$271.9	\$271.9	\$486.9	\$215.0	79.1%	\$215.0	79.1%

FY2017 Operating Budget *(in thousands) – UGF only*

	Trans Type	Fund Source	Amount
<u>Rural Energy Assistance:</u>			
			<i>FY2016 Management Plan</i>
			1,735.5
1) Reverse Out FY2016 one time salary reductions	SalAdj	GF	(156.7)
			<i>FY2017 Adjusted Base</i>
			1,578.8
2) Reduce Power Plant & Bulk Fuel Training Programs. Local residents learn how to operate and maintain their energy infrastructure and to assist utilities to keep their facilities code-compliant and managed sustainably. Less training opportunities in FY2017.	Dec	GF	(36.0)
3) Redirect activities currently funded by general funds in the operating budget to capital improvement projects. Additionally, AEA anticipates reducing operating activities that supported capital projects commensurately with decreased capital funding	Dec	GF	(71.5)
4) AEA is working with the U.S. DOE to secure funding for 2 positions that support community assistance efforts, without the federal funds, AEA will further reduce staff.		GF	(215.0)
5) Restore UGF FY2016 Salary Increases - move to unallocated component	SalAdj	GF	156.7
			<i>FY2017 Governor</i>
			1,413.0
<u>Statewide Project Development, AEE:</u>			
			<i>FY2016 Management Plan</i>
			2,796.3
1) Reverse Infrastructure to promote Affordable Energy Strategy (multi-year)	OTI	GF	(1,821.9)
			<i>FY2017 Adjusted Base</i>
			974.4
2) Reduce Shared Financial and Administrative Support	Dec	GF	(35.0)
3) Delete Technical Support & Community Outreach Staff - delete 2 full time positions that provide	Dec	GF	(200.0)
4) Delete Energy Policy & Outreach Director	Dec	GF	(120.0)
			<i>FY2017 Governor</i>
			619.4
<u>FY2017 Unrestricted General Fund Support for AEA programs:</u>			
			2,032.4
AEA's unrestricted general fund support of \$2,032.4 is used to pay for circuit rider assistance, community and technical assistance, project management support for the Emerging Energy Technology Fund, utility operator training programs, executive director salary, management team support for AEA programs and projects, warehouse support, and shared services (accounting, procurement, HR, IT). The unrestricted GF dollars represent 4% of AEA's budget.			

Additional FY2017 Operating Budget Items

(in thousands)

Section	Program	Amount
Language	Power Cost Equalization	\$40,355.0
Debt Service	Debt and Other Obligations: Kodiak Electric Association	\$943.7
Debt Service	Debt and Other Obligations: Copper Valley Electric	\$351.2
Fund Transfer	Fund Transfers – Renewable Energy Grant Fund	\$5,000.0

Capital Projects – FY2017 Request

(in thousands)

Project Description	State Funds	Federal Funds	Total Request
Electrical Emergencies Program	\$330.0		\$330.0
Renewable Energy Projects – Round IX	\$5,000.0		\$5,000.0
Rural Power Systems Upgrades	\$2,500.0	\$3,150.0	\$5,650.0
Bulk Fuel Upgrades	\$1,300.0	\$5,350.0	\$6,650.0
Alternative Energy & Energy Efficiency Programs	\$200.0	\$1,000.0	\$1,200.0
Fund Capitalization – Emerging Energy Technology Fund	\$1,000.0	\$250.0	\$1,250.0
TOTAL	\$10,330.0	\$9,750.0	\$20,080.0

Alaska Energy Authority: History

- 40 year old corporation that has many responsibilities and programs
- Reuniting state energy programs with the AEA owned assets in 1999 initiated the re-establishment of AEA as the energy office with renewed focus and funding for rural energy infrastructure
- When oil prices increased starting in 2007 and Alaska families and communities saw their energy prices sky rocket there was a push for further focused state leadership for renewable energy development and energy planning
- AIDEA and AEA were asked to help develop a plan and manage new energy programs
- Board of Directors responded in an efficient and cost effective manner, through by-law changes, established a management structure within AIDEA and AEA that allowed for the AEA “cost of energy” focus to be independent of AIDEA’s “jobs and economic development” focus
- The shared services of AIDEA and AEA bring expertise and structural flexibility to address state energy issues.

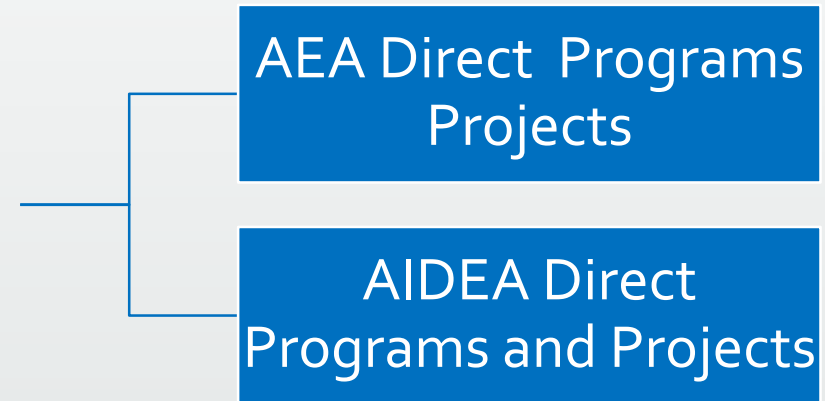
AEA and AIDEA: an Efficient Partnership

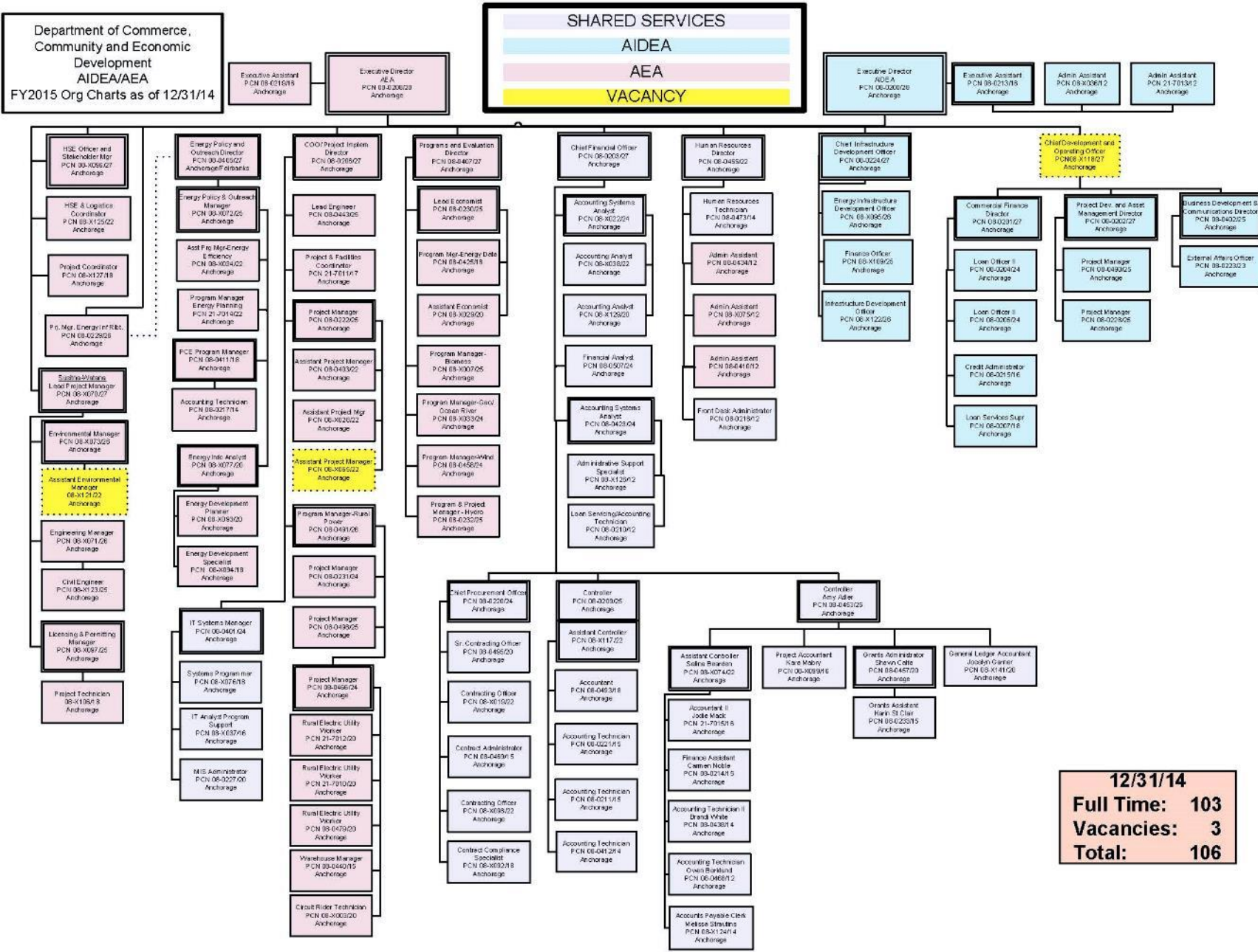
- Two distinct State corporations, with discrete programs and projects and separate executive directors
- There's no commingling of assets, liabilities, or programmatic operational activities
- A borrowing arrangement exists: AIDEA provides up to \$7.5M of liquid working capital to AEA
- AEA has no employees, AIDEA provides personal services, but is reimbursed by AEA
- AIDEA board members also serve as AEA board of directors, alternate chair and co-chair positions

Shared Services Supporting Functions

Shared Services

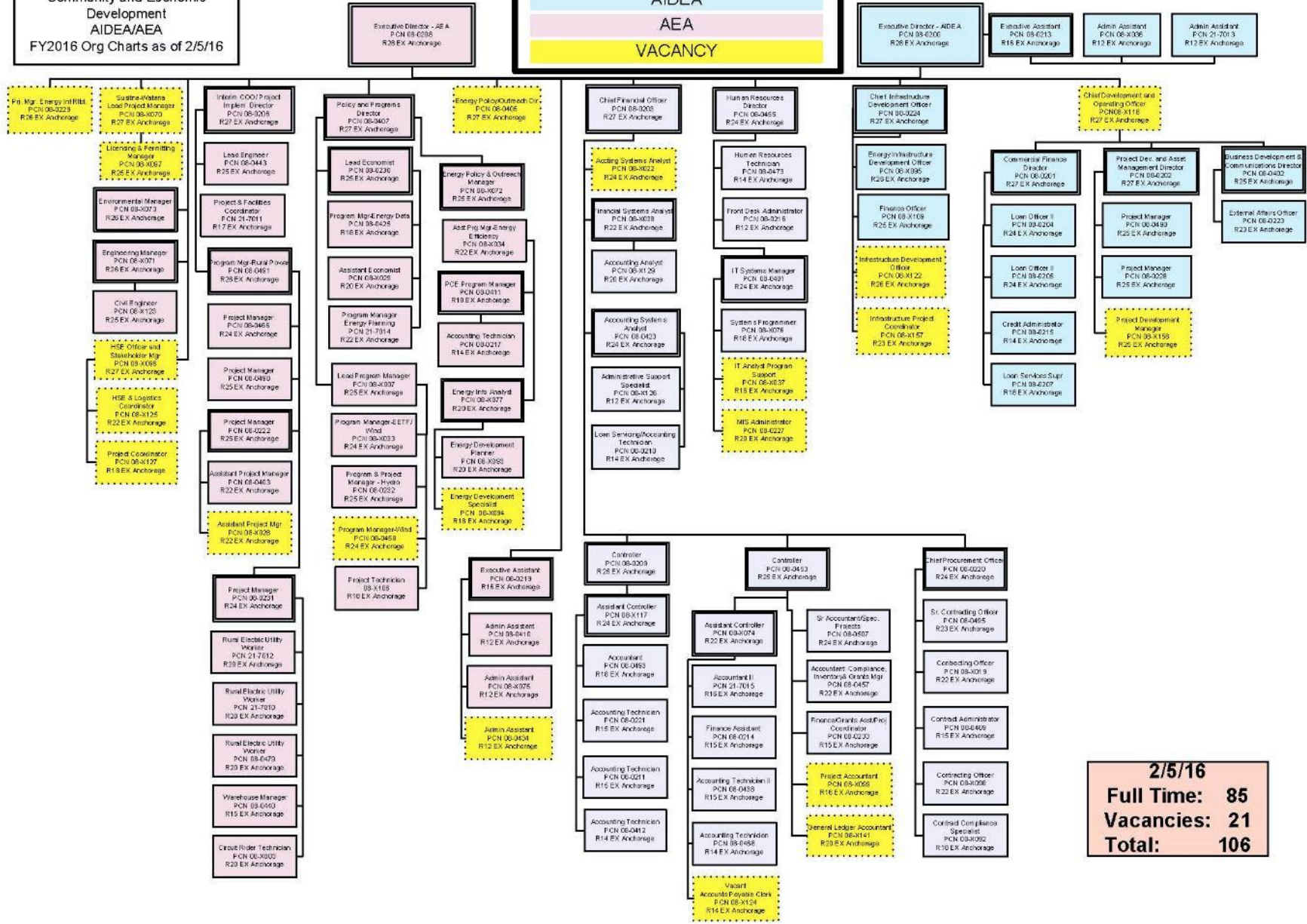
- Procurement
- Human Resources, Payroll
- Information Technology
- Building Management, Office Equipment, Office Space, Parking
- Budgeting, Appropriations
- Accounting
- Grant Management
- Bond Compliance
- Investing
- Debt Issuance
- Treasury, Banking Functions
- Internal and External Financial Reporting





Department of Commerce,
Community and Economic
Development
AIDEA/AEA
FY2016 Org Charts as of 2/5/16

SHARED SERVICES
AIDEA
AEA
VACANCY



AKEnergyAuthority.org

