

# Business Profitability and Community Sustainability

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SUSTAINABLE  
SOUTHEAST  
PARTNERSHIP



Renewable Energy  
Alaska Project



Renewable Energy  
Alaska Project



- 5 Staff
- 11 Years
- 68 Members
- 21 Board Members

- Education
- Outreach
- Collaboration
- Advocacy



[www.sustainablesoutheast.net](http://www.sustainablesoutheast.net)  
 Google Plus Community  
 Facebook  
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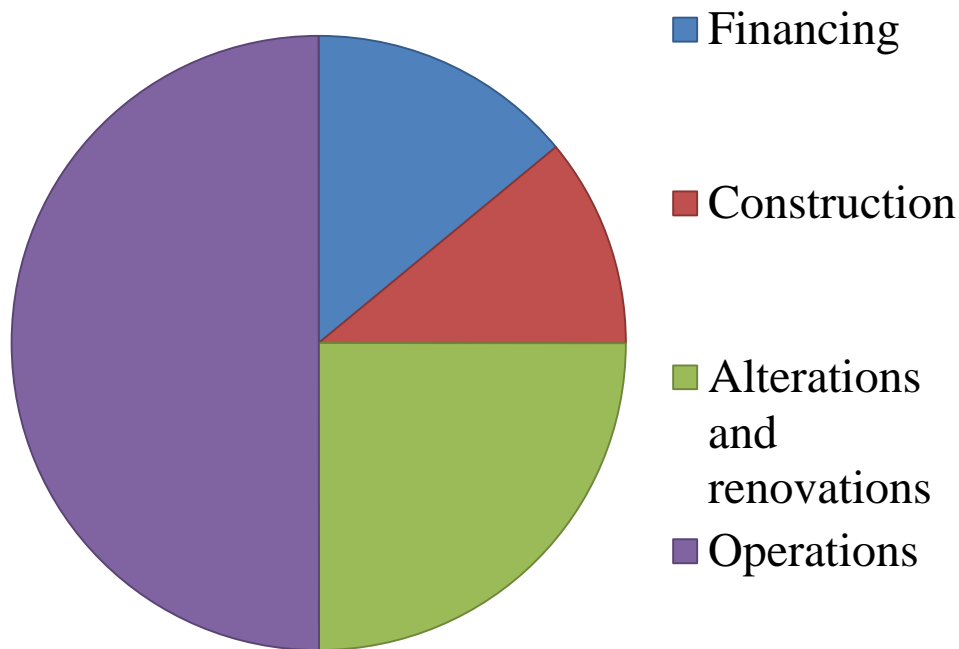


# Business Profitability and Community Sustainability

Strengthening  
energy systems  
and providing  
more reliable  
and affordable  
energy to local  
governments,  
households,  
and businesses



## The Big Picture: 40 Year Building Costs

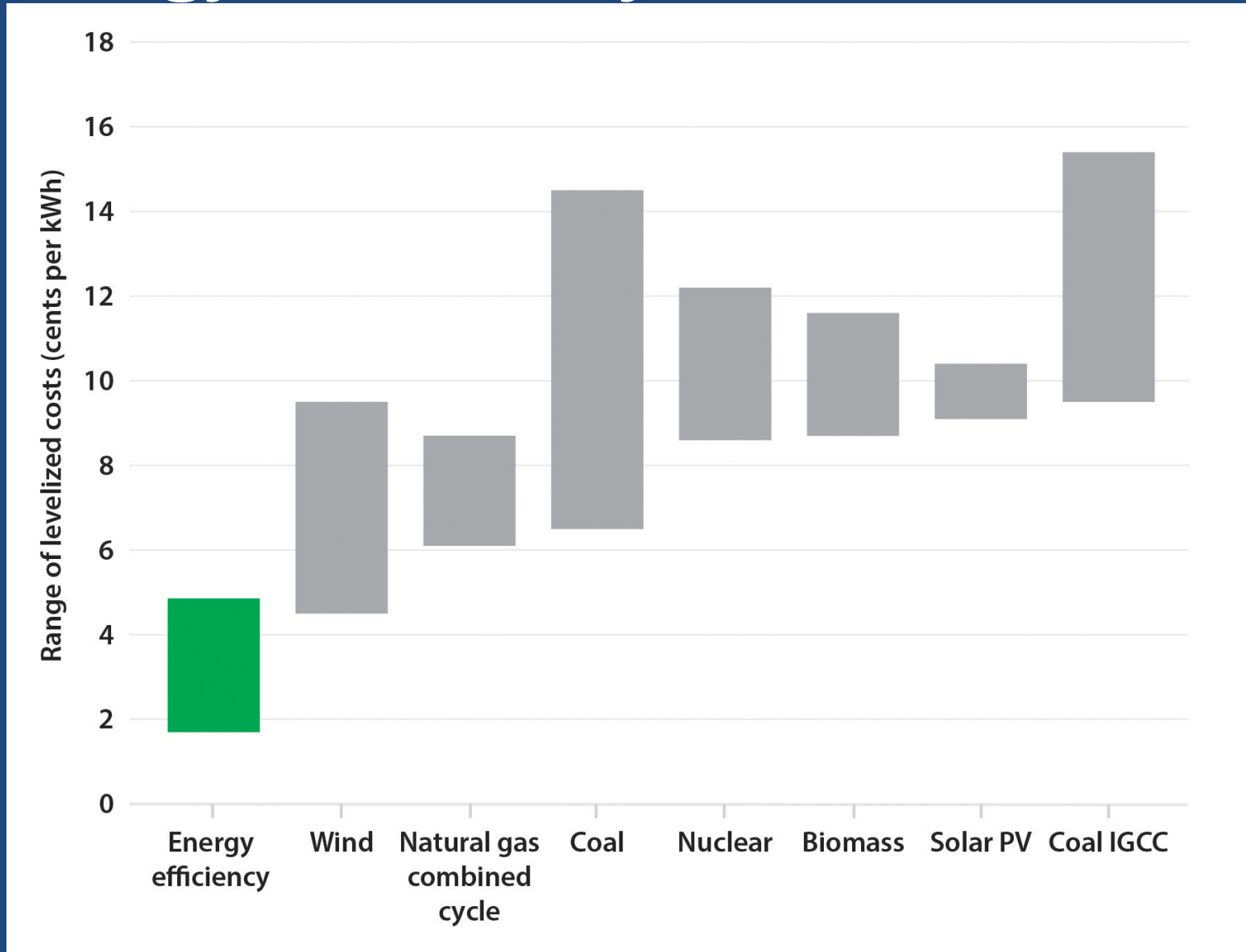


## Energy Efficiency: “The First Fuel”

Alaska goal to increase energy efficiency 15% per capita by 2020 and mandate retrofits in 25% of its public buildings.

24 states have Energy Efficiency Resource Standards (EERS).

# Energy Efficiency: The First Fuel





Conservation—  
Using Less

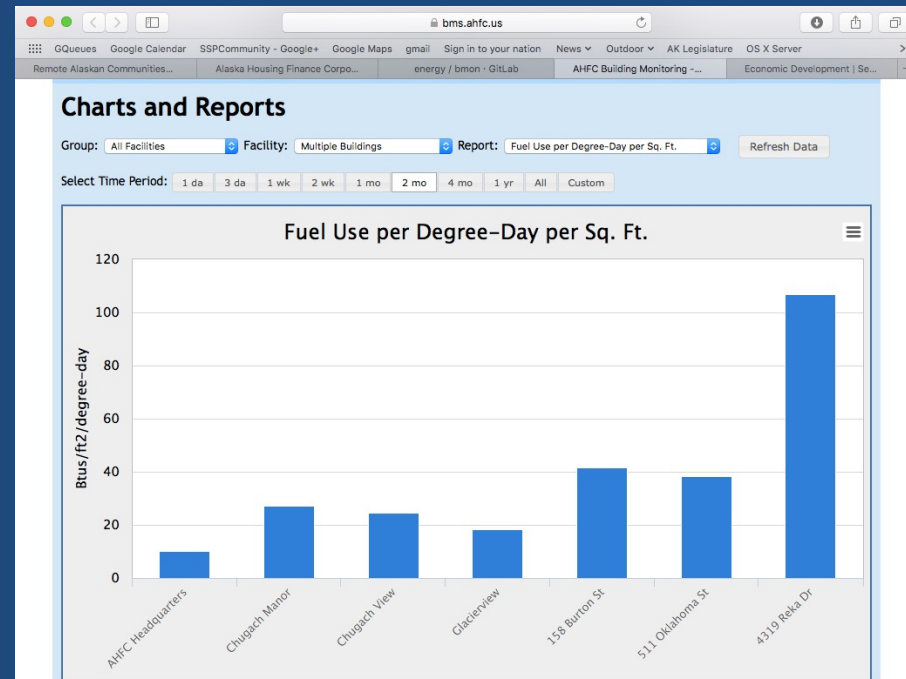
VS



Efficiency – “Doing  
More with Less”

# Clean Energy Resources

- Introduction to Energy Efficiency in Public and Commercial Facilities
- Strategic Energy Management Practices Guide
- Building Monitoring
  - Free open source building monitoring system
  - Ability to track building occupancy, temperature, electricity, and fuel use
  - Nearly 18% energy and cost savings at AHFC
- Cash Flow Calculator
  - Four scenarios are provided:
    1. Appropriation awarded on year 5
    2. Loan taken immediately
    3. Loan taken after a five year delay
    4. No action







# Clean Energy Financing Programs

- **Renewable Energy Fund & Emerging Energy Technology Fund**
  - \$259 million appropriated since 2008 for 287 grants
  - Saved the equiv. of 22 million gallons of diesel/ year (2015)
  - EETF: So far, \$12 million appropriated
- **Haa Aaní Community Development Fund**
  - \$3.5 million and continuing to grow
  - Focus on small business lending in Southeast, with business planning courses, training, and one-on-one technical Assistance
- **USDA Rural Energy for America Program (REAP)**
  - Grant and Loan Guarantee Programs
- **Alaska Energy Efficiency Revolving Loan Fund**
  - Retrofit financing for public facilities
- **Energy Audit Phase II !**

# Traveling Energy Efficiency Team

## Trip Components

- Free Commercial Building Energy Efficiency Workshop
- Walking Workshop
- Level I Energy Audit

## Public and Private Buildings Audited

Hoonah:	11
Haines:	9
Klawock:	6
Craig:	8

**Total: Over 230,000ft<sup>2</sup>**



Energy Audits of Alaska 

# Results...



*-Low hanging fruit (with Iggy the gnome)*

Photo Credit: Tim Leach

# Energy Audit Program Phase II

Save Energy & Money in Your Business  
or Fishing Vessel

Sign up **NOW** to Get **75% off** a Level I Energy Audit!

## **How to Apply:**

1. Talk to your neighbor.
2. Get at least two buildings per community to commit to the audit.
3. Share 2 years of energy use data.
4. Get an energy assessment.
5. Implement Energy Recommendations.
6. Save money – increase profits!

## Southeast Energy Audit Application

### PART I - FACILITIES INFORMATION

Facility Owner	Building Usage (Purpose)	Building Square Footage
Building Name		Year Built
Team Name		Building Address
		Building City, Zip

### PART II - CONTACT INFORMATION

Primary Name	Primary Email	Primary Phone
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### PART III - REASONS FOR PARTICIPATION

Please state why you are interested in this energy audit.

**PART IV - PLEASE SUBMIT** two years of wood) and electric (kWh) use by month.

### PART V - FUEL DATA RELEASE

This Release of Information expires one year.

Hereby signing, I, \_\_\_\_\_  
Renewable Energy Alaska Project to obtain

Electric Provider: \_\_\_\_\_

Electric Member-Account Number(s): \_\_\_\_\_

Primary Heat (Fuel) Provider: \_\_\_\_\_

Heat Member-Account Number(s): \_\_\_\_\_

Secondary (Fuel) Provider: \_\_\_\_\_

Secondary Member-Account Number(s): \_\_\_\_\_

Building Size	Cost of Level I Energy Audit	Cost to Building Owner (25%)
Up to 3,000 ft <sup>2</sup>	\$600	\$150
Up to 6,000 ft <sup>2</sup>	\$900	\$225
Up to 10,000 ft <sup>2</sup>	\$1,200	\$300
>10,000 ft <sup>2</sup>	*Contact Robert Venables for quote	

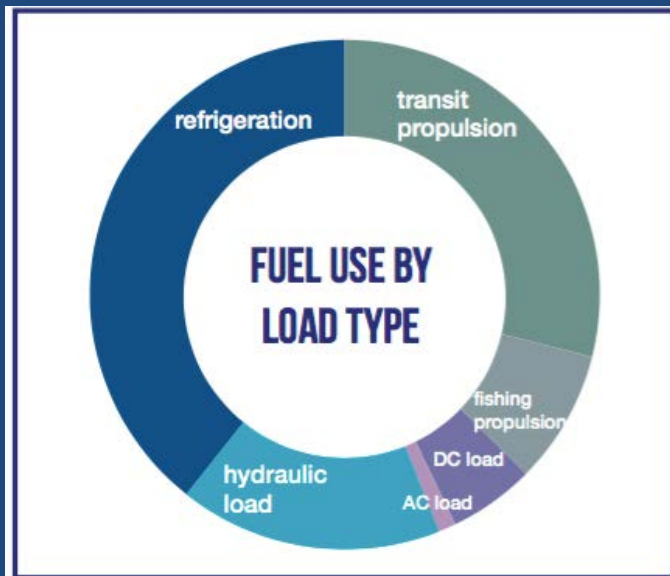
# Save Energy Expand Business



Energy Audits of Alaska

**New this year** – focus on fuel efficiency in fishing vessels!

Free workshop in Sitka with guest expert October 28



# a fisherman's guide to FUEL EFFICIENCY

Improving fuel efficiency can help fishermen to save money and reduce their carbon footprint.

HERE'S HOW:

In 2013, the Alaska Fisheries Development Foundation, the Alaska Longline Fishermen's Association, and the Alaska Sea Grant Marine Advisory Program collaborated on a project to conduct energy audits on small Alaska fishing vessels. The energy audits collected baseline data on how much energy various systems on a fishing vessel use and provide context for energy conservation measures.

The information below is based on the Alaska Sea Grant publication "Saving Money with Fishing Vessel Energy Audits", a result of this collaborative project.

## GENERAL OPERATION

**Adjust your autopilot**  
Ensure autopilot is tuned to minimize yaw and steer the straightest possible course

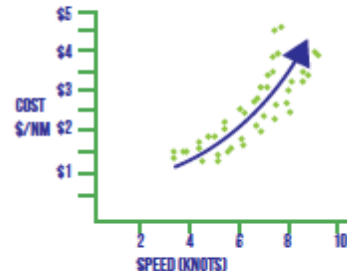
**Reduce drag**  
Keep the hull clean by removing marine growth regularly. Minimize underwater appendages such as rolling chocks, transducers, stabilizers, and mounts

**Use shore power**  
When dockside, using shore power is more cost effective than running an onboard diesel generator

### Plan route

Take advantage of tides, currents, and predicted winds to save fuel

### SPEED VS. COST: VESSELS 40-50'



### Slow down

Decreasing your speed significantly reduces fuel consumption. This is the #1 way to save fuel!

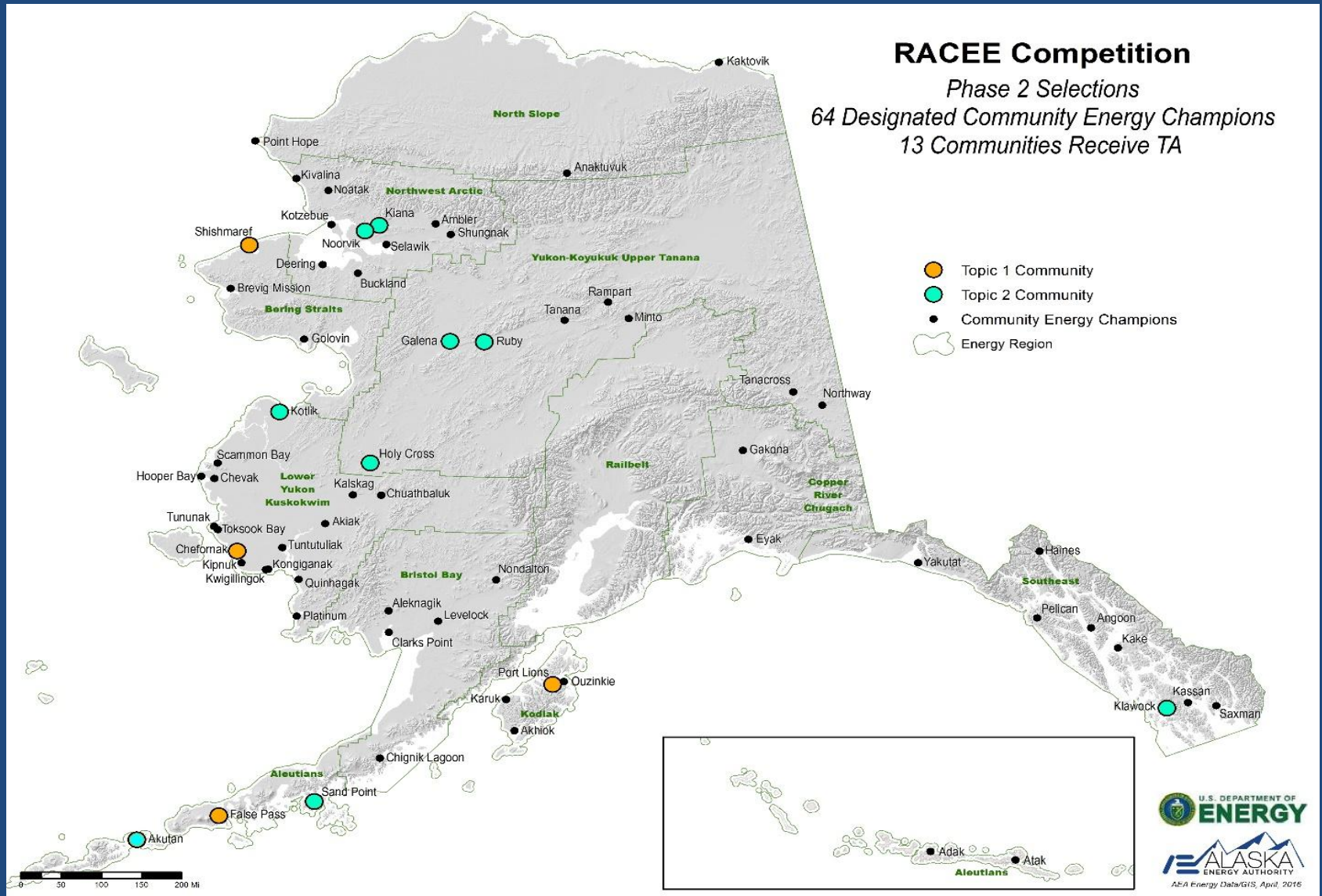
## ENGINE EFFICIENCY

**Check exhaust**  
Exhaust from a well-maintained diesel engine is almost invisible

**Check propulsion**  
A typical propeller converts only about 50% of horsepower into thrust. Improper sizing or marine growth can make propellers even less efficient

**Use diesel engines fully loaded**  
Diesel engines are most efficient when providing about 40%-80% of their rated horsepower. At light loads, diesel engines use more fuel/HP

# DOE RACEE – Remote Alaska Communities Energy Efficiency Competition





Collaborative Effort: Klawock Heenya Corporation, Klawock Cooperative Association, The City of Klawock, and The Klawock City School District, with assistance from Alaska Power and Telephone (AP&T)



# Biomass Fueled Greenhouse Handbook





[www.akenergychallenge.org](http://www.akenergychallenge.org)



Governor Bill Walker  
STATE OF ALASKA



Renewable Energy  
Alaska Project



Thank You!



Renewable Energy  
Alaska Project