



National Community Solar Partnership

Building with Benefits: Community Engagement and Innovation

July 12, 2023

Housekeeping

- This session **is** being recorded
- Slides and a link to the recording will be made available online after the event
- Please put questions for panelists and moderators in the Q&A

A two-story residential building with a dark blue accent wall on the left side and light-colored horizontal siding on the rest. The roof is covered with solar panels. The building has several windows and a wooden door with a small porch. A black metal railing is visible in the foreground. The sky is clear and blue.

Welcome & Introductions

In the chat, please feel encouraged to share your name, organization, and why you're joining this conversation about community engagement and innovation for community solar.

Webinar Agenda

Time (ET)	Topic	Presenter
2:00 – 2:05	Welcome & National Community Solar Partnership Overview	Ariel Drehobl, U.S. Department of Energy
2:05 – 2:10	Overview: Innovation and Engagement	Moderator: Mikhaila Gonzales, Initiative for Energy Justice
2:10 – 2:40	Project & Program Highlights: Implementing Community Engagement and Innovation	Evan Ramsey, Bonneville Environmental Foundation Ingemar Mathiasson, Northwest Arctic Borough Emil King, DC Department of Energy and the Environment
2:40 – 3:10	Panel Discussion and Q&A	Panelists & Moderator
3:10 – 3:15	Closing & Staying Engaged	Ariel Drehobl, U.S. Department of Energy



National Community Solar Partnership Overview

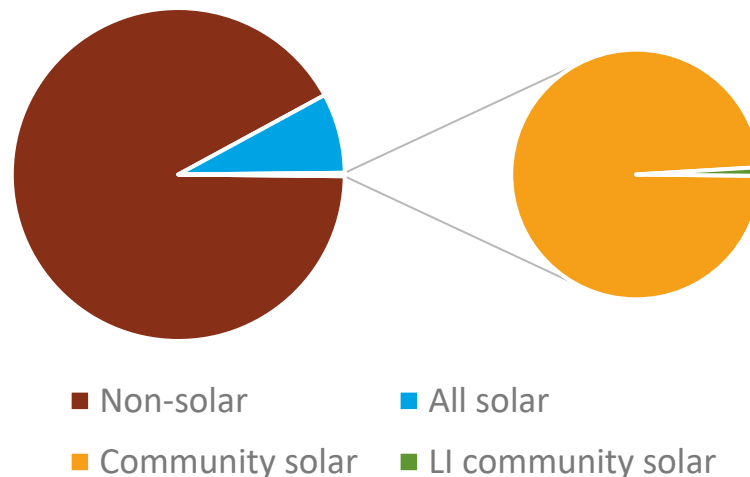
Community Solar Opportunity

- Half of all households and businesses **cannot** host a solar PV system on their roof, due to:
 - Solar Potential
 - Insufficient Roof Space (e.g., *high rise*)
 - Roof Ownership/Tenancy

Across the United States:

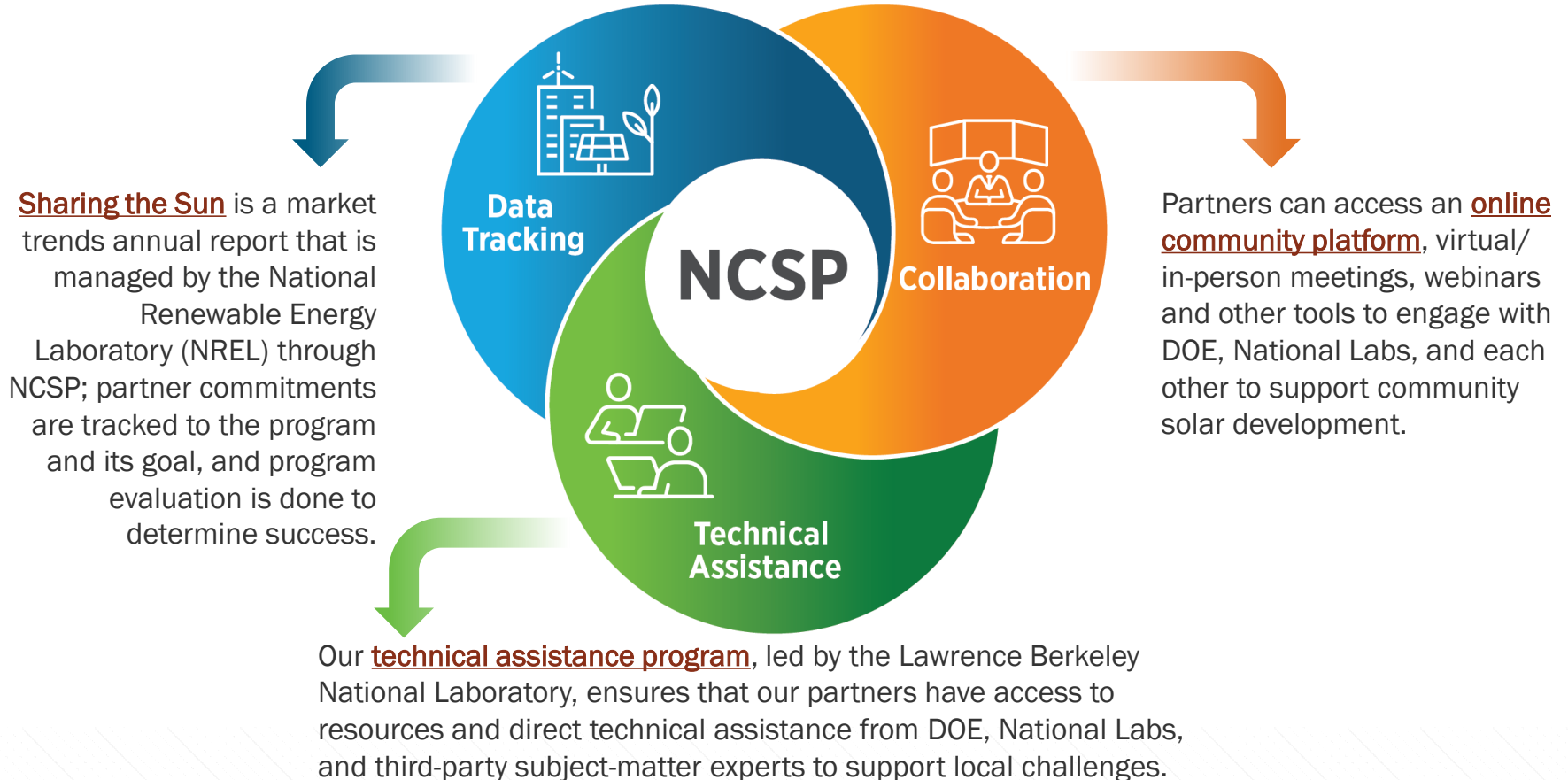
- **<10%** of electricity is generated by solar
- **<5%** of all solar electricity is generated by community solar
- **<1%** of all community solar is mandated or incentivized to serve low- to moderate-income households

Community Solar as a Percentage of Total U.S. Energy Generation



Sources: EIA, SEIA, NREL, NREL (unpublished)

The National Community Solar Partnership



Pathway to Success Priorities

TECHNICAL
EXPERTISE
AND CAPACITY
BUILDING



STATE
ENGAGEMENT



ACCESS
TO CAPITAL



CUSTOMER
ENGAGEMENT



EDUCATION
AND OUTREACH



**NCSP
TARGET**
5 million households
and \$1 billion in
savings by 2025

Resulting in...

- ★ An average 20% energy bill reduction
- ★ 700% increase in community solar capacity

Meaningful benefits:

Greater household savings; LMI household access; Resilience and grid benefits; Community ownership; Workforce development and entrepreneurship

Meaningful Benefits of Community Solar



GREATER HOUSEHOLD SAVINGS

- Provide a reduction in electricity bills for residential subscribers to a project

Justice40 Priority 1:
Reduce Energy Burden



LMI HOUSEHOLD ACCESS

- Include subscribers from low- to moderate-income (LMI) households

Justice40 Priority 3:
Increase Clean Energy Parity



RESILIENCE AND GRID BENEFITS

- Include the capability to deliver power to households and/or critical facilities during a grid outage or strengthen grid operations

Justice40 Priority 7:
Increase Energy Resiliency



COMMUNITY OWNERSHIP

- Local community members, subscribers, or local community organizations own or have equity in the project
- Other wealth-building strategies

Justice40 Priority 8:
Increase Energy Democracy



WORKFORCE DEVELOPMENT AND ENTREPRENEURSHIP

- Support prevailing wages and pre-apprenticeship and apprenticeship programming
- Ensure women- and minority-owned businesses have equitable opportunity

Justice40 Priority 6:
Increase Clean Energy Jobs

2022 Sunny Awards for Equitable Community Solar

\$100,000 Prize

Recognize community solar projects and programs that employ or develop best practices to increase equitable access to the meaningful benefits of community solar

Meaningful Benefits Categories

- Greater Household Savings
- Low- to Moderate-income Household Access
- Resilience and Grid Benefits
- Community Ownership
- Equitable Workforce Development
- *Innovation Category: Community Engagement*
- *Innovation Category: Impact*



2022 Grand Prize Projects & Programs serve 7,300 Low- to Moderate-Income Households



2023 Sunny Awards are open now!

Up to \$200,000 in Prizes
Applications due July 14th



Initiative for Energy Justice

Mikhaila Gonzales

Program Director



**FOUR PILLARS
OF ENERGY
JUSTICE**

01

RECOGNITION

WHO IS VULNERABLE? WHO IS PRIVILEGED?

02

PROCEDURAL

*WHO IS AT THE TABLE AND WHAT POWER
DO THEY HAVE?*

03

DISTRIBUTIONAL

*WHO BEARS THE BRUNT OF THE
BURDENS? WHO BENEFITS?*

04

RESTORATIVE

*HOW CAN WE RECTIFY PAST INJUSTICES
AND PREVENT FUTURE HARMS?*



Equitable Community Solar

1. Allocating energy and benefits from one solar system to multiple customers;
2. Intentionally focusing on benefiting marginalized communities; and
3. Prioritizing local community governance and ownership.



Bonneville Environmental Foundation

Evan Ramsey

Senior Director, Renewables Program



**BONNEVILLE
ENVIRONMENTAL
FOUNDATION**

COMMUNITY ENGAGEMENT AND INNOVATION

July 12th, 2023

Evan Ramsey, Sr. Director, Renewables





BEF Programs



WATER
STRATEGIES &
RESTORATION



EDUCATION
PROGRAMS &
ACTIVATIONS



RENEWABLES
SOLUTIONS & SERVICES



ENVIRONMENTAL PRODUCTS
RECs, OFFSETS & WRCs

Renewables Program



UTILITIES

CONSULTING & PROJECT DEVELOPMENT



ELECTRIC VEHICLES

PROGRAM DEVELOPMENT



TRIBAL ENERGY

PROJECT DEVELOPMENT & FUNDING



LOW INCOME SOLAR

THOUGHT LEADERSHIP & DEVELOPMENT



sunward

Building Community Energy Together

*We are dedicated to providing the **economic and environmental benefits** of renewable energy to communities throughout the Pacific Northwest.*

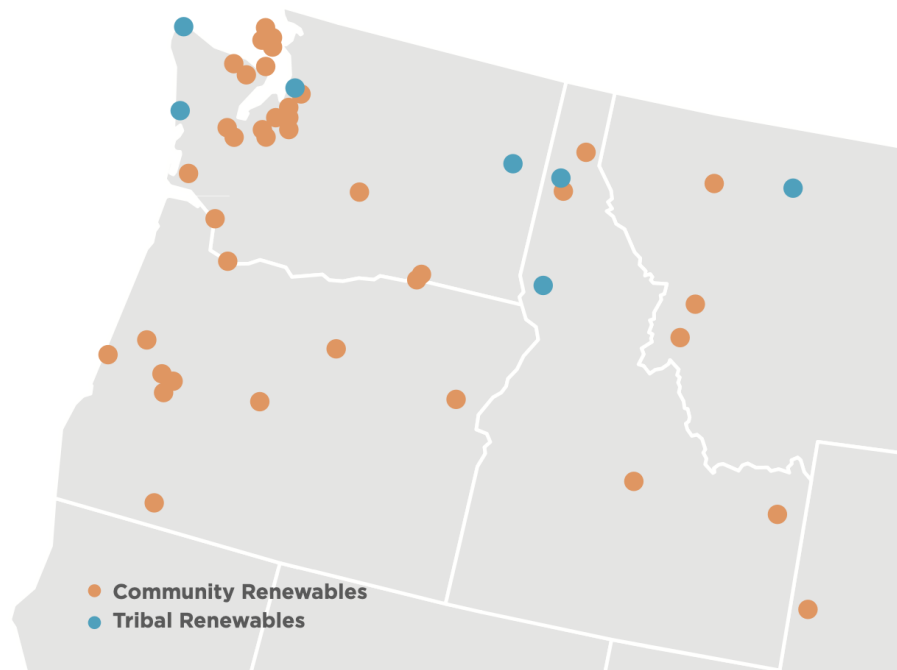
*We **build partnerships** that develop renewable energy projects and deliver positive impacts and cost savings to communities.*

Who we work with

- Tribes
- Local governments
- Affordable housing providers
- Community groups
- Nonprofits
- Consumer-owned utilities
- Community Development Corporations
- School districts
- Businesses

What we provide

- Capacity building
- Site Analysis
- Feasibility studies
- Grant writing support
- RFP development
- Financial modeling
- Workforce development facilitation
- Project funding
- Contractor selection
- Community education





Community Partners



CHRISMAN
DEVELOPMENT
INCORPORATED



Dignity Village





Multifamily Solar Pilot Projects



ELKHORN VILLAGE APTS

99.4kW
Baker City, OR

**1st Solar on USDA
Affordable Apartments**



JIM AND SALLE'S PLACE APTS

48 kW
Portland ,OR

**1st to Utilize DOE
Weatherization Funds**



SAGINAW MOBILE HOME PARK

103 kW
Cottage Grove, OR

**1st to Benefit
Residents Directly**

Blackfeet Nation Community Solar Project

- **Partnership**
 - Blackfeet Community College, Heart Butte High School, GRID Alternatives, Glacier Electric Cooperative, BEF
- **Workforce training**
 - Hands-on install experience and professional training for Blackfeet community members, led by GRID Alternatives resulting in 2 permanent jobs
- **An estimated \$17,983 in energy savings**
 - 20 households subscribed each year, saving \$120-\$330/year
- **Teacher training**
 - BEF's [CE Program](#) worked with Shelby Jones, Heart Butte STEM educator to develop renewable energy curriculum
- <https://www.nytimes.com/2022/09/15/climate/solar-energy-school-funding.html>



TRIBAL SOLAR
ACCELERATOR FUND

GRID Alternatives



Home of the Warriors

Innovation and Community Engagement

What does this mean for BEF?

Innovation:

- Virtual bill crediting
- Securing grant funds maximize long term value
- Directing corporate donations to projects

Community Engagement:

- Capacitating partners
- Co-creating projects
- Patience, consistency, and longevity
- Realizing meaningful benefits and wealth building





EPA Solar for All

Idaho, Montana, Wyoming

Please reach out if interested in an application





Evan Ramsey

Senior Director, Renewables

503-553-3933

eramsey@b-e-f.org

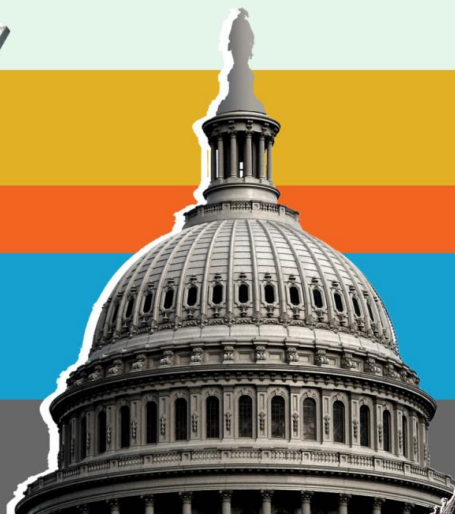


DC Department of Energy and the Environment

Emil King
Program Analyst

DISTRICT OF COLUMBIA SOLAR FOR ALL

NCSP Webinar Series - Building With
Benefits: Community Engagement
and Innovation



GOING SOLAR IN DC: THE OPTIONS

1

Solar For All

2

Market Rate Solar

WHY WE'RE DOING IT



Solar for All aims to bring the benefits of solar energy to 100,000 low to moderate income families in the District of Columbia by 2032. DOEE is partnering with organizations across the District to install solar on single family homes and develop community solar projects to benefit renters and residents in multi-family buildings. All Solar for All participants should expect to see roughly 50% annual savings on their electricity bills for periods of 15 years or more, and can be proud to have gone solar!

WHO IS SERVED?

- Over 160 community renewable energy facilities serve more than 6,000 LMI households.
- Subscriptions are sized to provide community net metering credits that offset approximately about 50% of the subscriber's electric utility bills, averaging \$520 in savings per year.
- Household income must be demonstrated to be at or below less than 80% of the area median income (AMI), based on household size.



PROJECT FUNDING

- DC Renewable Portfolio Standard establishes noncompliance fees for energy suppliers failing to meet annual solar energy purchase requirements
- Fees are paid into a special purpose fund (Renewable Energy Development Fund, REDF) that supports the development of SfA projects.
- The DC Sustainable Energy Utility (DCSEU, under contract to DOEE) provides a capacity-based incentive capped at \$1.25/Watt_{DC}.
- Incentive rates are determined annually during the DCSEU RFP process - solar developers bid by proposing the rate at which they are offering to include each host site in the program.
- Capacity-based incentive coupled with federal tax benefits and Solar Renewable Energy Certificates (SRECs) covers the cost of developing, constructing, operating, and maintaining each installation.



OUTREACH CHALLENGES

- Customer Acquisition – “Nothing is free. What’s the catch?”, new technology, community mistrust and distrust, market confusion and prevalence of scams
- Site Acquisition – geography limits large systems, property types may have limitations on uses, property owner timelines and development cycles
- Subscriber Management – ongoing engagement is critical during the subscriber’s customer journey

COMMUNITY ENGAGEMENT

DC Solar for All prioritizes community engagement by partnering with various organizations focused on specific aspects of program delivery.

- Groundswell - in-person educational and informational events across all 8 Wards
- DC Solar United Neighbors (SUN) – in-person educational and informational events, coordination of solar purchase cooperative buying opportunities for market-rate installations
- iChoosr - SUN partner on customer engagement and group-buys
- DCSEU workforce development program - connects residents with a 5-month paid green externship with local contractors, businesses, municipal agencies, other organizations. Covers job skills development, on-the-job training, OSHA training, certifications, direct work experience with mentors, and job placement assistance.
- Many Solar for All community solar projects are built in community-centric locations (churches, multi-family housing buildings, etc).
- Relationships with host sites to further engage and empower

SOLAR FOR ALL: WHAT IS THE OFFER?

SOLAR CAN BE FREE

Solar for All's goal is to expand the District's solar capacity and provide the benefits of locally-generated solar energy to low-income households. Through Solar for All, 100,000 low and moderate-income households in the District of Columbia will receive the benefits of solar. The Department of Energy and Environment is implementing the program through local organizations, who are installing solar on single-family homes and developing community solar projects to benefit renters and residents in multifamily buildings.

To qualify, residents must meet these income guidelines:

PERSONS IN HOUSEHOLD	1	2	3	4	5	6	7	8
INCOME LIMIT	\$67,950	\$77,650	\$87,350	\$97,050	\$104,850	\$112,600	\$120,350	\$128,150

CURRENT OFFERINGS AS OF AUGUST 1, 2019

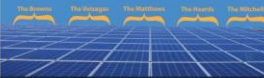
REDUCE ENERGY BILLS • NO COST TO PARTICIPATE • REDUCE YOUR CARBON FOOTPRINT
UP TO \$500 SAVINGS ANNUALLY • HOMEOWNERSHIP NOT REQUIRED

COMMUNITY SOLAR

Community Solar provides the benefits of solar to residents who can't install systems on their home, including renters and homeowners whose rooftops are shaded or need repairs. A community solar project is not located on the home, but offsite, and the benefiting household (called a subscriber) receives a credit on their monthly electric bill.

HOW TO APPLY

DEPARTMENT OF ENERGY & ENVIRONMENT (DOEE)
DOEE has opened enrollment for several community solar projects. Call (202) 299-5271, email solarforall@dc.gov, or visit doee.dc.gov/solarforall for more information on how to apply.



SOLAR ON YOUR ROOF

Renters or homeowners can get rooftop solar panels installed at no cost. If a roof is not shaded from sunlight, solar panels can make the same amount of free electricity a resident would otherwise have to buy from the electric company. These savings are applied as a credit on monthly electric bills.

HOW TO APPLY

DC SUSTAINABLE ENERGY UTILITY (DCSEU)
Contact DCSEU at (202) 478-2222 or visit doeeu.com/solar-for-all for more information and to apply.



For more information about additional community solar projects, which will be made available to residents in Fall/Winter 2019, please:

CALL (202) 299-5271 | EMAIL solarforall@dc.gov | VISIT doee.dc.gov/solarforall



TAG THIS PRESENTATION: @DOEE_DC



SOLAR FOR ALL: COMMUNITY SOLAR



Going solar saves money and reduces your carbon footprint. Through Solar for All, a Department of Energy & Environment (DOEE) program, the DC Sustainable Energy Utility (DCSEU) is working with local solar contractors to design and install solar photovoltaic (PV) systems at no cost to income-qualified District homeowners. These systems have the potential to offset electricity costs by as much as \$500 per year.

For more details visit: <https://www.doe.dc.gov/solar-for-all>

SOLAR FOR ALL: SOLAR ON YOUR ROOF



Renters or homeowners can get rooftop solar panels installed at ***no cost***. You can reduce your electricity bill and save up to \$500 annually. This program also helps the District reach its clean energy and climate goals.

For more details visit: <https://www.dcseu.com/solar-for-all>

WHAT IF I DON'T QUALIFY?

FIVE STEPS TO SOLAR*

1. Find your Site Potential with the DC Solar Tool
2. Contact Installers to get a site assessment and Quote
3. Decide to Own or Lease (Financing Options)
4. Explore Local Bulk Options
5. Install and Reap the Benefits!

*Find the complete guide on the web, doee.dc.gov/service/solar-initiatives

Solar Electric Potential Report

Financials

Building Type	Residential	
System Size	Cost per Watt	Total Cost
124.96kW	× \$ 3.00	= \$ 374,888
Federal Tax Credit		\$ (112,466)
Other Deductions		\$ 0
Cost to Owner		\$ 183,332
Generation Value		\$ 1,714
SRECs		\$ 6,591
Average Monthly Revenue		\$ 4,040
Average Yearly Revenue		\$ 48,486
Payback Period	2 years, 8 months	
Net Present Value		\$ 625,267
Return		59.3%

Payment Calculator

Loan	\$ 183,331.75	Rate %	5.00
Down	\$ 0	Years	10
Monthly Payment	\$ 1,944.52		

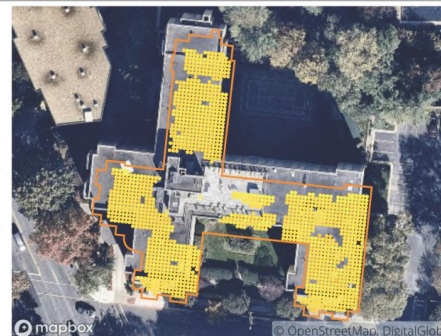
System Specs

Optimize Panel Tilt	<input checked="" type="checkbox"/>
System Size (kW)	124.96
Average SAI	0.92
Panel Efficiency	18.0%
Electricity Output (kWh/y)	158,181
PV System Area (sqft)	7,472.7
Number of Panels	425
Panel Peak Rating (Wp)	294
Total Roof Area (sqft)	22,609.52
PV System Roof Usage	33.1%

Carbon Offsets

CO ₂ Offset (US tons)	136.8
Carbon Capture (trees)	3,182
60-Watt Lightbulb (days)	109,870
Air Conditioning (hours)	105,981
Driving Distance (mi)	245,747
Flying Distance (mi)	508,736

Note: All equivalencies per year.



125kW System Size

3.18 k Trees Planted	137 T Carbon Offset	18 Homes Powered
\$ 183 k Cost	3 - year payback	\$ 48.5 k Revenue

Important: Check with your utility for net-metering conditions and limitations.

IMPORTANT NOTICE Mapdwell® Solar System™ is no substitute for an on-site assessment performed by a certified professional. Mapdwell Solar System is a remote evaluation tool, based on topographical surveys, information models, and simulation methodologies, and results may be unavailable or inaccurate due to issues including, but not limited to, partial sample obsolescence, excess of vegetation or non-modeled obstructions, incomplete or corrupted databases, incomplete or corrupted GIS layers, undetectable partial obstructions based on survey resolution, and force majeure. Mapdwell LLC does not guarantee the accuracy of the data or the applicability of the information provided by the Solar System platform.

WE'RE HERE TO HELP

Questions on the District's Solar Initiatives? Contact us.

Solar for All Program

[DOEE.DC.GOV/Solarforall](https://doee.dc.gov/solarforall)

(202) 299-5271





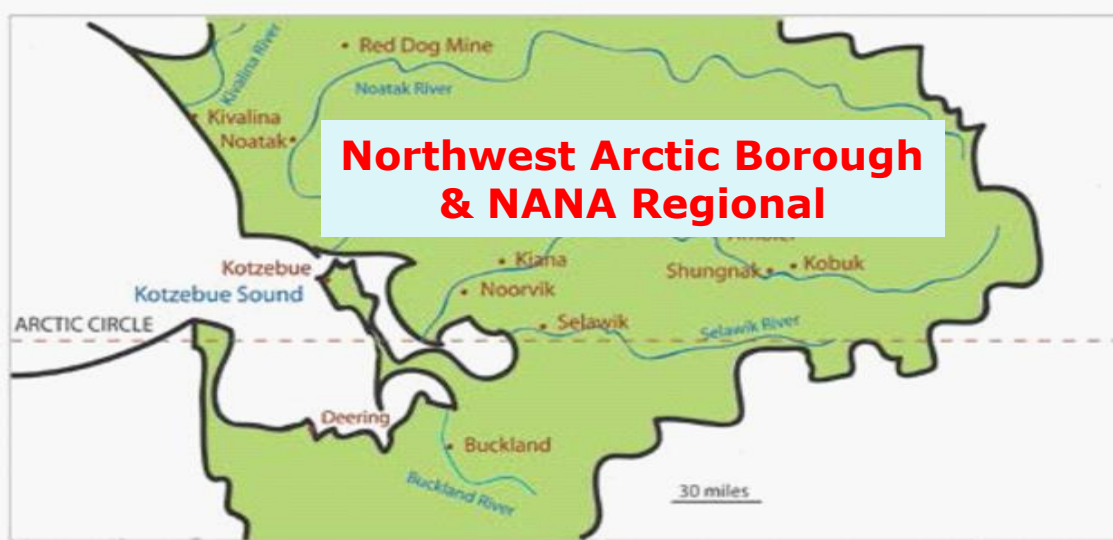
Northwest Arctic Borough

Ingemar Mathiasson

Renewable Energy Manager



NCSP Innovation and Engagement – Planning Next Steps Regionalization for Renewable Energy



**Public Private Partnerships &
The case for
Community – IPP's**

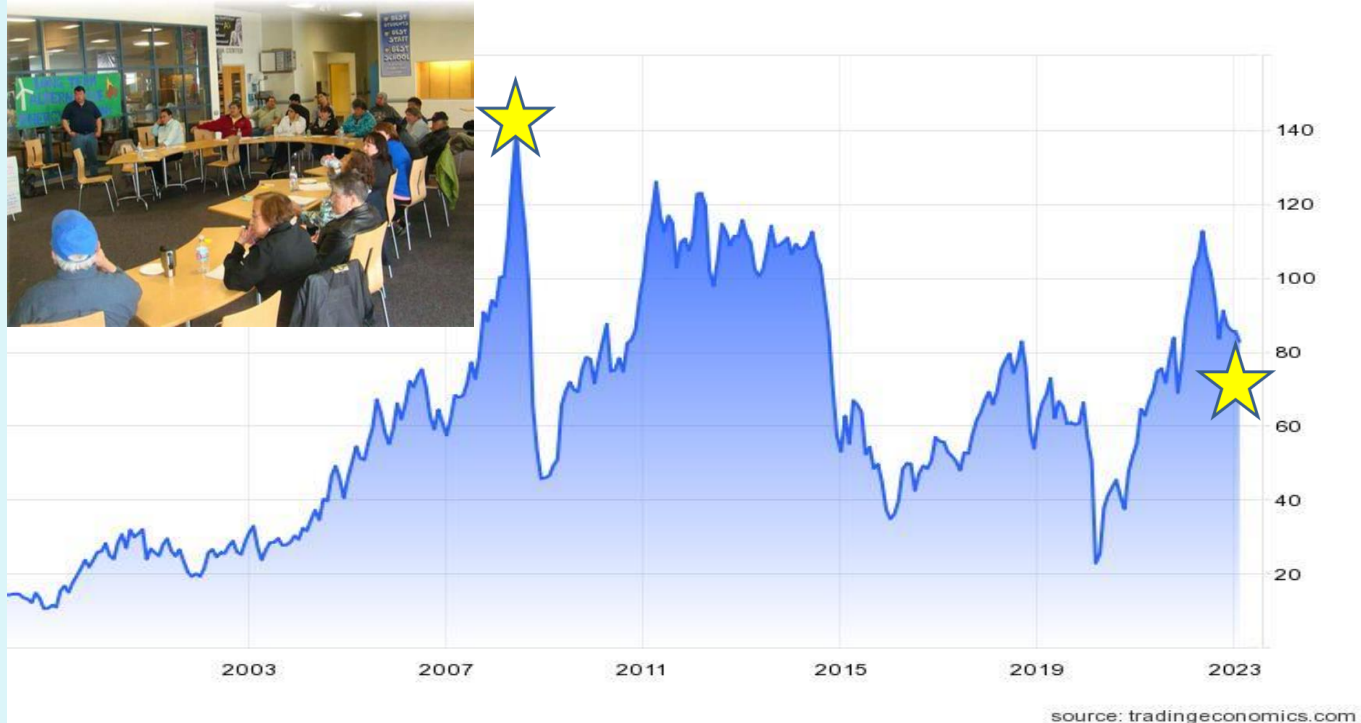


Why are we here ?



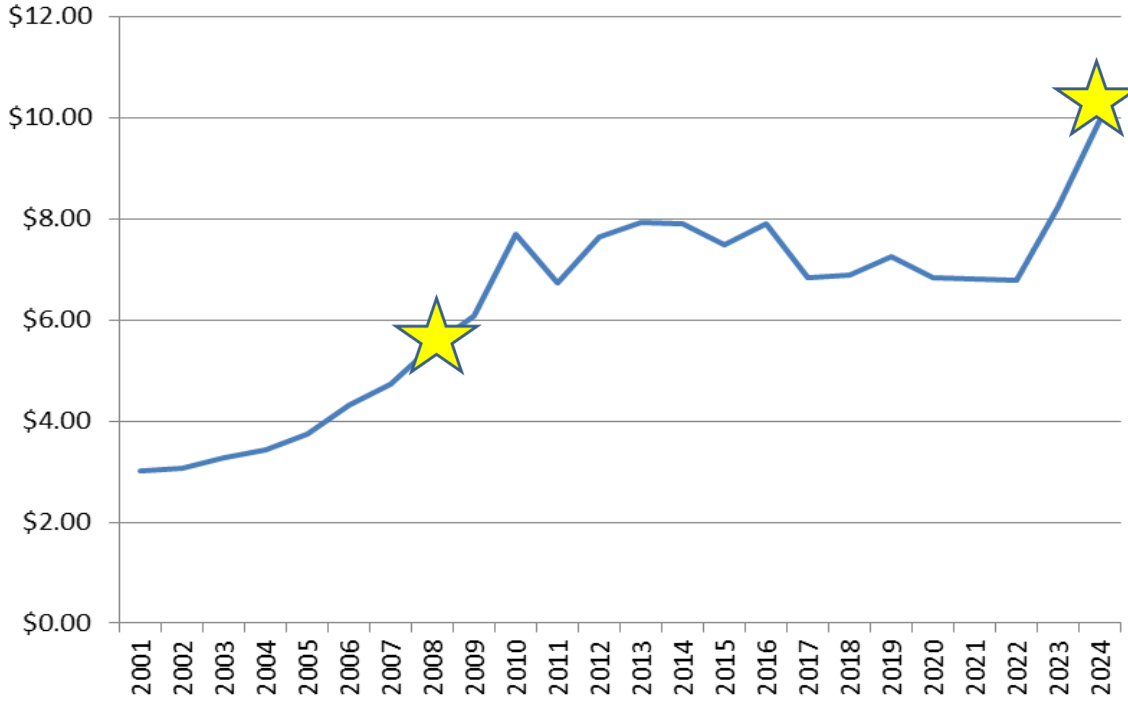
Some background

2008 Energy Summit



Brent Crude oil prices over time

Average Retail Stove oil prices per Gallon for the Northwest Arctic Borough



Fuel prices (tax included on retail) April. 2023 & FY24

Community	Gasoline \$/G Retail	Stove oil \$/G Retail	Sales Tax included	Util. & AVEC Cost \$ Barge/Air FY2022- FY2023	NWABS Cost \$ FY2023- FY2024
Kotzebue KIC and KEA	8.99	9.12	6%	3.71 KEA/ 3.20	4.54/4.7605
Kotzebue Vitus	7.99	7.57	6%		
Kotzebue Crowley	7.80	7.97	6%		
Ambler	14.42	14.42	3%	4.49 /11.50	6.07/6.2505
Kobuk	13.91	15.45	3%	N/A	6.07/6.2505
Shungnak	14.03	15.05	2%	5.45 / 11.50	6.07/6.2505
Kiana	7.98	7.73	3%	2.82/4.18	4.71/5.0005
Noorvik	7.21	6.18	4%	2.96/4.63	4.71/5.0005
Selawik	5.68	6.58	6.5%	2.85/4.52	4.71/5.0005
Buckland	7.65	7.66	6%	2.13-3.547	5.25/5.0005
Deering	5.50	5.20	3%	2.13-4.057	4.71/5.0005
Kivalina	6.52	6.52	2%	2.78/4.18	5.16/5.0005
Noatak	14.49	15.31	6%	8.10/10.75	7.24/10.96

NAB Electric rates, Apr 6 2023

Community	1-750Kwh \$/Kwh with PCE	Tax	1-750 Kwh Actual cost/Kwh with tax	0-750 \$/Kwh No tax	750-up \$/Kwh No tax	Utility Non firm power purchase rate \$/Kwh 1/30/2023
Kotzebue KEA	0.2275	6%	0.24	0.3949	0.3918	N/A
Ambler AVEC	0.2651	3%	0.2731	0.8621	0.7566	0.3949
Kobuk AVEC	0.3348		0.3348	1.0988	0.9933	N/A
Shungnak AVEC	0.3348	2%	0.3414	1.0988	0.9933	0.6138
Kiana AVEC	0.2553		0.2647	0.6654	0.5599	0.2733
Noorvik AVEC	0.2545	4%	0.2647	0.6490	0.5435	0.2507
Selawik AVEC	0.2521	7%	0.2697	0.6027	0.4972	0.2053
Buckland BEC	0.2781		0.2781	0.4900	0.4900	0.2823
Deering IEC	0.4081		0.4081	0.6747	0.6747	0.3575
Kivalina AVEC	0.2535	2%	0.2586	0.6295	0.5240	0.2442
Noatak AVEC	0.3724	6%	0.3947	1.1364	1.0309	0.6682

Northwest Arctic Energy Steering Committee

Co-Hosted & Sponsored by:

Northwest Arctic Borough – Energy Program

NANA Regional Corporation – Alternative & Village Energy Program



2009-2023



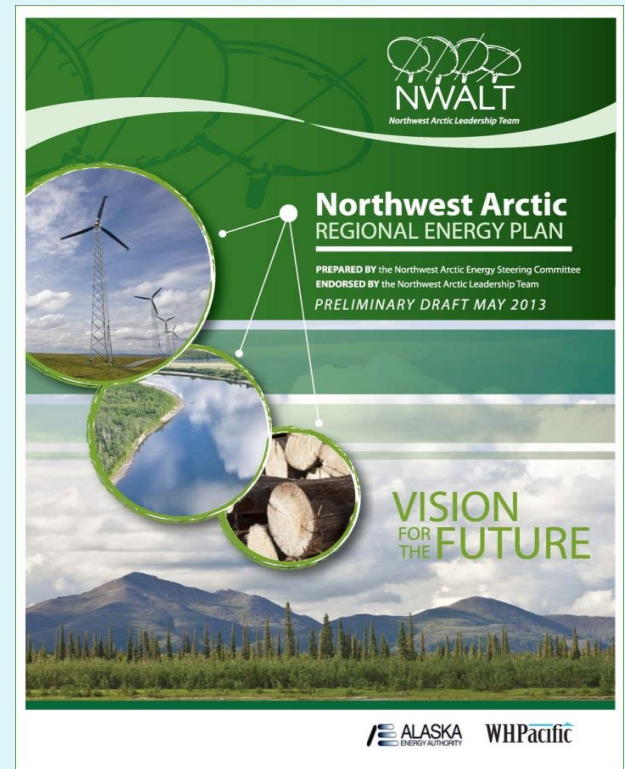
NANA-NAB Energy planning

Started in 2008-2009

Current version 2020

Available @Nwabor.org

The vision is for the Northwest Arctic region to be 50 percent reliant on regionally available energy sources, both renewable and non-renewable, for heating and generation purposes by the year 2050. And to combat rapid climate change due to greenhouse gas emissions like Co2, Methane and other harmful effects of fossil fuel usage.

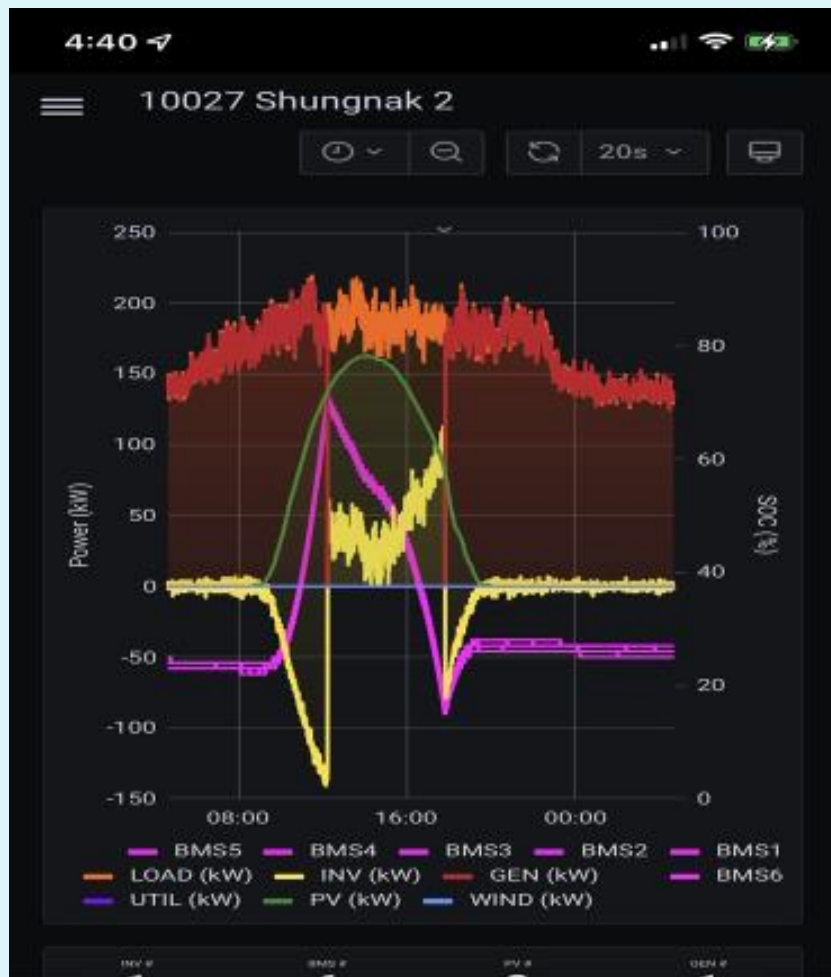


The progression is planned as follows:

10 percent decrease of imported diesel fuels by 2025 On track

25 percent decrease of imported diesel fuels by 2030

50 percent decrease of imported diesel fuels by 2050



To get there, we need to go;

Diesels Off

Our Single Focus in 2008-2012

- **To try to stabilize the cost of electricity by developing local energy resources as much as possible (Wind-Hydro) and possibly bring down cost/Kwh**
- **Projects were funded and then implemented by Electric Utilities to offset the use of Diesel fuel.**
- **The cost to the Households/Kwh did not change in communities that receives PCE funding,**
- **Instead, as more Alternate Energy projects were built by grants, the allocation of PCE decreased to the communities.**

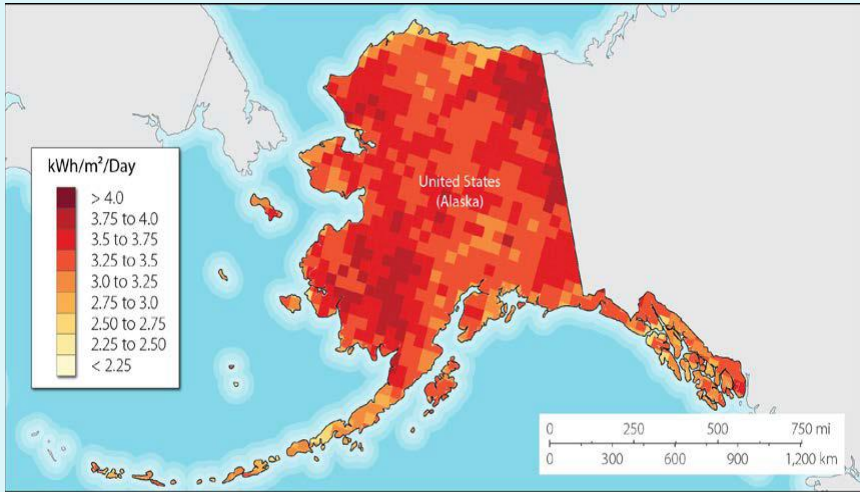


Buckland & Deering Wind Diesel Project 2008-2012

As a condition of the grant, Independent Power Producers will agree to sell energy resources for electricity and heat at a cost-based rate for the economic life of the project.

Possible available funding for Solar projects under IPP management per year

Community	Installed Kw	Production Kwh	Behind meter PCE value / Kwh	Avoided Diesel rate \$/Kwh	Value under IPP Management \$/Kwh
Shungnak Ut	233	200,000	\$51,100.00	0.5600	\$ 112,000.00
Noatak Ut	275	250,000	\$66,725.00	0.4868	\$ 121,700.00
Noorvik Ut	23.4	23,400	\$5,667.48	0.1685	\$ 3,942.90
Deering Ut	48.5	48,500	\$17,338.75	0.3500	\$ 17,338.75
Buckland Ut	45.99	45,000	\$12,703.50	0.2823	\$ 12,703.50
Kotzebue	966	920,000		0.18	\$ 165,600.00
Total	625.89	566,900	\$ 153,534.73		\$ 414,685.15



***Celebrating 10 Years of
Solar PV development in the
Northwest Arctic Borough
2013-2023
250,000 Gallons saved
7.8 Mil lb of CO2 not released***



6/15/2020
Kotzebue Electric
Utility Array 576 Kw
Building out an additional
631Kw in 2023
822.47 Mwh produced to
date,
saving 58,800 Gallons of
Diesel



Courtesy
ANRI

9/26/2021
Shungnak-Kobuk IPP
233Kw/350Kwh
Community Solar/Battery
273 Mwh produced to date,
Saving 19,500 Gallons of
Diesel to date
And 818 Hours of Diesel off
operation



Courtesy
ANRI

Transition to Village Independent Power Producers IPP's, 2020



• So why develop Independent power producers

- The Communities taking control of their Energy future, developing their local resources. This creates buy in and good relationships with the utility.
- Being able to sustain PCE support to the communities and stabilize energy cost.
- Better economics, Circular economy
- Funding collected pays for further development and local workforce expertise. The money stays in the community instead of sending the money to far off countries for oil.



Reasons for Regional approach to Alternate Energy Development

- *Regional* support to apply for and manage Energy grants, including access to Dept. of Energy and other funding.
- Economy of Scale and Increasing Efficiency
- (Small, single projects are too expensive).
- Develop Regional Energy infrastructure:
- Wind, Solar, Hydro, Interties, bulk fuel storage & direct Household involvement.



- Admin help for Independent power producers (IPP's) for PCE calculations, utility rates & billing.
- Job Creation - Workforce Development and Training/Capacity building.
- The Region speaking with one voice. Can advocate on behalf of PCE and State wide Energy Policy.
- This creates Energy Security and is needed to stop the increasing cost of Energy and hedge against fuel increases and supply disruptions.



The Shungnak Solar IPP Project

Shungnak-Kobuk 223.5 DC/200 AC Kw Solar/battery PV array.
Using 550pc Bifacial 405W panels

Blue Planet environmentally friendly LFP Battery.
Capable of holding the two communities
for 2 Hours without Generators or Solar power.
Capacity 250Kw/352Kwh

Start of construction April 2021 completed Sep 2021.

Total project cost \$ 2,363,215.11

Funded by USDA HECG @ \$ 1,291,675.00
In-kind VIF and NAB funds \$ 1,071,540.11



Shungnak-Kobuk Solar IPP example

- **A Grant opportunity from USDA HECG was secured by the 2 Tribes by allowing NAB to apply on behalf of the Communities.**
- **The communities are interconnected with a power line so the proposed Solar project benefits both.**
- **Through an MOA a working agreement is executed between the 2 tribes to become an IPP (independent power producer)**
- **A power purchase agreement is executed with the utility AVEC.**
- **AVEC pays for the Solar power and recover the cost partly from the PCE fund.**
- **Another MOA is executed with NAB for help with admin and investment of funds.**
- **An Energy fund is established for the communities.**
- **Funds dispersed for insurance and maintenance and eventual further build-out of the Solar array.**

Alaska Tribes Recognized with Sunny Award for Equitable Community Solar



Congratulations! The DOE Solar Energy Technologies Office awarded a [Sunny Awards Grand Prize](#) to the Shungnak-Kobuk Community Solar Battery Independent Power Producer project, in Shungnak, Alaska.

This solar and battery project led by the Shungnak and Kobuk tribes in the Northwest Arctic Borough region aims to stabilize the cost of electricity and allow the communities to take charge of their energy future. The Shungnak project also received the [2022 Microgrid Project of the Year](#) from *Solar Builder* magazine.

Following suit: Among current Office of Indian Energy projects, the [Northwest Arctic Burrough 2021 Project](#) with the Native Village of Noatak is emulating the Shungnak project and is making progress on a high-penetration distributed solar-battery hybrid system.



A Loud Shout-out to all Partners; USDA, Shungnak IRA, Kobuk IRA, NAB, NANA, AVEC, TECK, ANRI, AGETO, Blue Planet, Deerstone, Daylight services, Launch Alaska & others that contributed to the success of the project

Shungnak-Kobuk IPP Yearly financials FY22

Estimated Gross Annual Revenue	\$120,000.00
Insurance	\$3,771.32
Electric	\$1,958.05
Ageto service fee	\$3,242.28
Tribe Employee	\$8,683.44
Fuel	\$3,150.00
Total Estimated Expenses	\$20,805.09
Estimated Net Income	\$99,194.91
Estimated Administrative Fee (10% Annual Net)	\$9,919.49
Annual Income Less Admin Fee	\$89,275.51

The Noatak Solar IPP Project 2023

Noatak 280.6 DC/250Kw AC Kw Solar/battery PV array phase 1.
Using 432 pc Canadian solar Bifacial 650 W panels
Expansion to 380.6 Kw available for phase 2.

Kronus/Pylontech LFP Battery 438.5 Kwh
Capable of holding the to communities for 2 Hours
without Generators or Solar power.

Construction Sep 2022 to July 2023.

Total project cost \$ 2,946,886.00
Funded by DOE Tribal grant @ \$ 2,008,765.00
Denali Commission \$ 134,079.00
Teck (Red Dog) \$ 100,000.00
NANA VEI and inkind \$ 309,998.00
In-kind VIF and NAB funds \$ 394,123.00



The Selawik Solar IPP and REPOP

Selawik 130kw DC/100Kw AC Kw Solar/battery PV array phase 1.
Using 200 pc Canadian solar Bifacial 650 W panels
Expansion to 500 Kw available for phase 2.

Blue Planet LFP Battery, 1 Mw
Capable of holding the to community for 4 Hours
without Generators or Solar power.

Start of construction Sep 2023 completion by July 2024.

Total project cost \$3,611,190.00

Funded by USDA REPP @ \$1,998,820.00

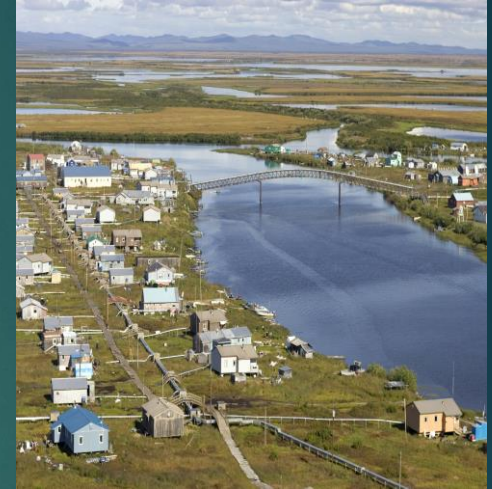
AEA REF 14 \$ 250,000.00

AVEC \$ 100,000.00

Teck (Red Dog) \$ 100,000.00

NANA VEI and inkind \$ 130,000.00

In-kind VIF and other NAB funds \$ 1,032,370

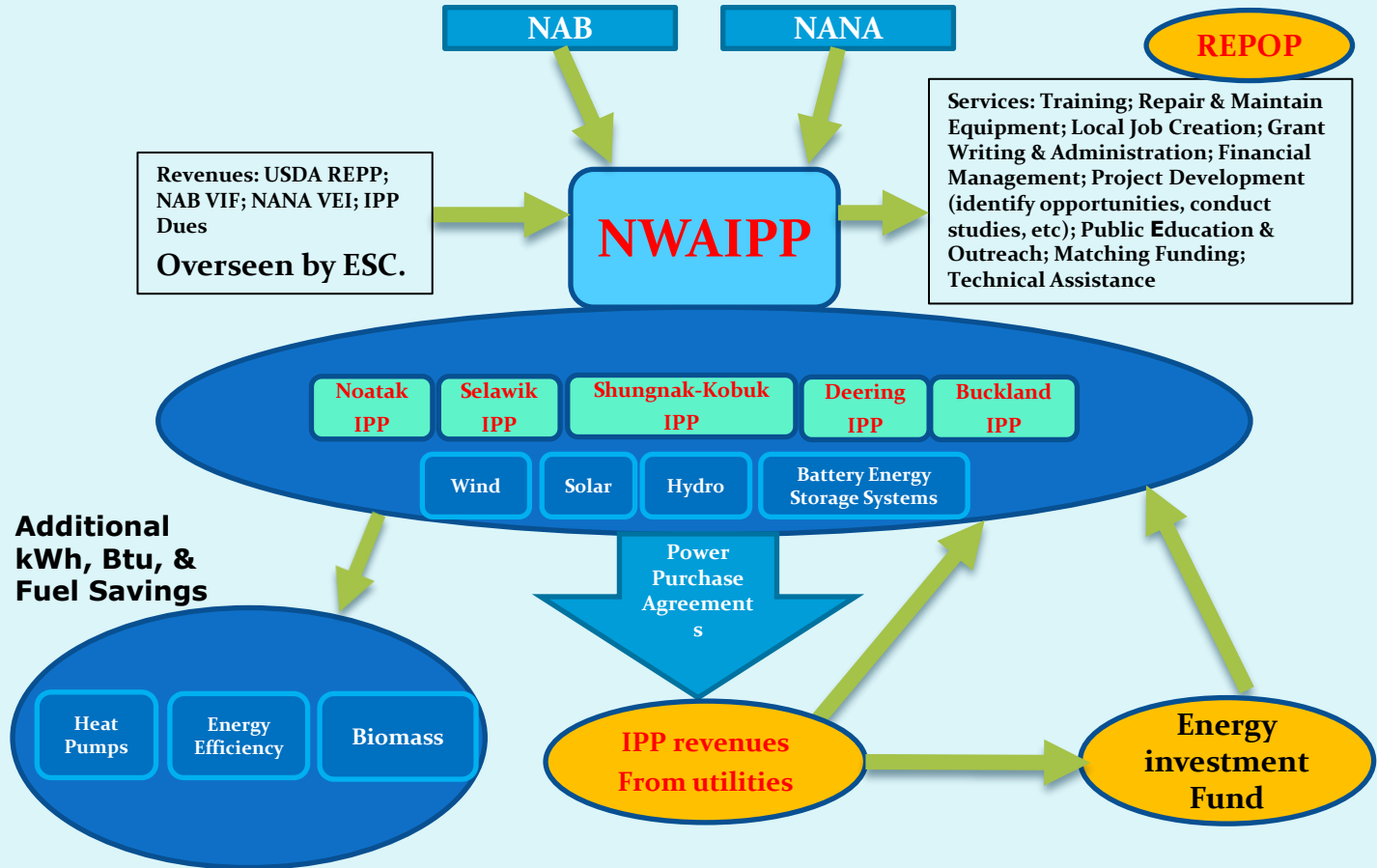


5 Year plan

Solar IPP's full build out

Community	Total			Total
	Solar PV	BESS	Combined	Diesel offset
	kW	MW	MWh/year	Gallons/year
Ambler	400	1	360	25,714
Buckland	450	1	405	28,929
Deering	250	0.5	225	16,071
Kiana	400	1	360	25,714
Kivalina	450	1	405	28,929
Noatak	550	1	495	35,357
Noorvik	550	1	495	35,357
Selawik	500	1	450	32,143
Shungnak-Kobuk	500	1	450	32,143
TOTALS	4,050	8.5	3,645	260,357

Regional IPP Organizational Structure





The Energy Steering Committee 15 Years and Going 2009-2023

Goals and lessons learned

- **Make a sustained effort, realize that changes comes slowly with understanding of new ways and operation.**
 - **Continue to work with the Regional Energy Plan**
 - **It is the "Vision" for the future, from the people for the people.**
- **Make sure the document gets updated periodically as it is a "Dynamic" living document and needs to be able to "Adapt" to changes when new thinking and resources comes along.**
 - **Hopefully it will never be completed.**

Energy Policy

- **Do we develop Energy resources for short time profits ?**
- **Or do we develop Local Energy resources that can sustain the Region for the foreseeable future and create a cleaner environment for our Children ?**

Energy and Persistence Conquer all things

Benjamin Franklin

Questions ?
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Tel. 907-445-5034

Energy Efficient
Coordination

2003 4 11



Discussion + Q&A

Building with Benefits Webinar Series



GREATER HOUSEHOLD SAVINGS: Monday, May 22nd 2:00 – 3:15 p.m. (ET)

[SLIDES & RECORDING](#)



LMI HOUSEHOLD ACCESS: Wednesday, May 31st 2:00 – 3:15 p.m. (ET)

[SLIDES & RECORDING](#)



RESILIENCE AND GRID BENEFITS: Wednesday, June 7th 2:00 – 3:15 p.m. (ET)

[SLIDES & RECORDING](#)



WORKFORCE DEVELOPMENT AND ENTREPRENEURSHIP: Wednesday, July 5th 2:00 – 3:15 p.m. (ET)

[SLIDES & RECORDING](#)



COMMUNITY ENGAGEMENT & INNOVATION: Wednesday, July 12th 2:00 – 3:15 p.m. (ET)

[SLIDES & RECORDING](#)



COMMUNITY OWNERSHIP: Wednesday, July 25th 2:00 – 3:15 p.m. (ET)

[REGISTER](#)

2023 Sunny Awards for Equitable Community Solar

- NCSP launched the **2023 Sunny Awards** on April 20, 2023 to recognize community solar programs and projects that include meaningful benefits
- Up to five \$10,000 Grand Prize Winners and up to 30 additional \$2,500 Sunny Finalize Awards and up to 15 \$5,000 Meaningful Benefits/Engagement Awards

Apply by July 14, 5pm ET!



Applicants can receive recognition for programs that include:
LMI access, household savings, resilience and grid benefits, community ownership, workforce development, equitable community engagement, and innovation

Looking Forward

[Apply for the 2023 Sunny Awards for Equitable Community Solar](#)

[Register for 'Building with Benefits' Webinar Series](#)

[Join the Community Power Accelerator](#)



Register to Join NCSP:

<https://ncsp.solarinyourcommunity.org/registrations/groups/39758>

Resources + Follow Up

Links to resources shared during Building with Benefits: Low to Moderate-Income Access

DOE Resources Shared: