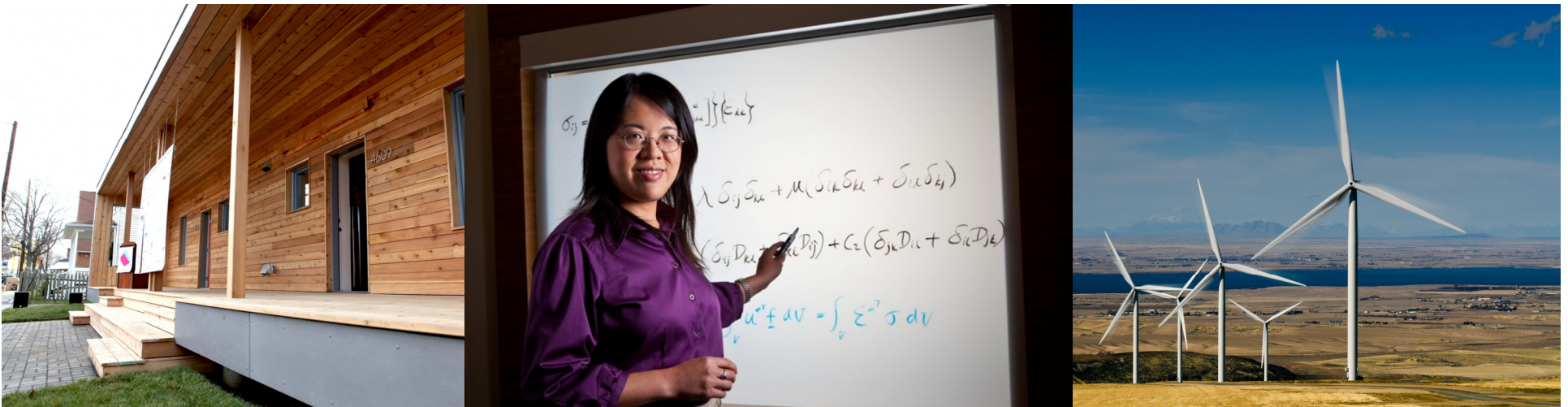


Demonstrating Innovation and SEP

Kelsie Bell

SEP Project Officer, US Department of Energy

August 14, 2019



SEP Formula Annual Summaries

Program Guidance 10-006E: DOE Reporting Requirements for the State Energy Program

“An Annual Summary must be submitted to the assigned Project Officer. The Annual Summary should describe high-impact or exceptionally innovative activities undertaken during the program year and include information related to: quantitative energy savings, grant funds allocated to activity, barriers and solutions, and lessons learned. The Annual Summary should also describe any significant energy-related legislative actions or policies enacted due, at least in part, to DOE formula funds. **The Annual Summary must be submitted no later than 90 days following the end of the budget period.”**

What do we use them for?

- Each Program Year (PY), DOE will analyze Annual Summaries to capture those impacts that can be attributed specifically to the SEP Formula program. This will **assist DOE in communicating these impacts** to outside stakeholders using measurable and verifiable data.
- **Different from PAGE reporting.**
 - Tell us what activities you are most excited about and want to share with others!
 - Further break down of costs, impact, and metrics of activities you are proud of so we can share your success!
 - Share lessons learned, barriers, and technical assistance to help others achieve the same successes!
 - Provide SEP with feedback so we can better assist you!

Upcoming* New Template

STATE ENERGY PROGRAM

ANNUAL FORMULA GRANT SUMMARY TEMPLATE

This EERE template is provided for your convenience. Although the use of this template is not required, the data elements within the template are. Note this template was updated [INSERT DATE].

Summary of Updates:

- 1) Reduced reporting burden as States will only report on those activities where a verifiable impact occurred, an energy-related policy was adopted, or practices around emergency preparedness were improved;
- 2) Opportunity to identify technical assistance resources used to support the activity;
- 3) Clarification on how Annual Summaries are being used by DOE to communicate success; and,
- 4) Increased opportunity to highlight multiple-year efforts.

Background:

Each Program Year (PY), DOE will analyze Annual Summaries to capture those impacts that can be attributed specifically to the SEP Formula program. This will assist DOE in communicating these impacts to outside stakeholders using measurable and verifiable data. Therefore, going forward, we are asking States and Territories to summarize **only** those activities that led to a measurable, verifiable impact in PY(x) and fall within one of the four categories below:

- 1) Projects resulting in verifiable estimated or actual quantifiable energy savings and/or increased renewable energy capacity;
- 2) Projects resulting in verifiable estimated or actual jobs created;
- 3) Projects resulting in adopted energy policies; and,
- 4) Projects resulting in updated resiliency and/or emergency plans and activities.

Please do not use the Annual Summary to describe activities where no measurable, verifiable impact was made in PY(x). Work towards goals, success stories, and lessons learned across your entire SEP Formula portfolio will be captured in PAGE quarterly performance reports.

The information you provide in this Annual Summary will also be used to expand peer matching, create mentoring initiatives, and better develop technical assistance resources.

Please read the directions for each section carefully and consult with your Project Officer for additional assistance.

STATE:

ORGANIZATION:

GRANT NUMBER:

Describe activities that resulted in verifiable estimated or actual **quantifiable impacts**. Examples of activities include (but are not limited to):

- Building retrofits;
- Renewable installations;
- Workforce development; and/or,
- Loan, rebate, or grant programs.

TITLE:

BRIEF DESCRIPTION OF ACTIVITY:

PROJECT YEAR (PY) WORK BEGAN: If the measureable impact occurring in PY(x) was a result of work initiated in previous program years, please share the year that work began.

GOAL(S): Please describe the goal of the activity including, if applicable, a description of barriers or knowledge gaps the activity sought to overcome.

IMPACTS: Please describe achievements accomplished during PY(x) in terms of verifiable estimated or actual energy and monetary savings achieved, renewable energy capacity increased, electric vehicles added, and/or jobs created.

COSTS: In order for DOE to accurately communicate the impact of SEP Formula funding, please estimate:

- 1) The amount of SEP Formula funds used to support the activity. If Formula funds were used to support the activity in previous program years, to the extent possible, please include those costs in the total broken out by program year.
- 2) The amount of leveraged funding used to support the activity. Where applicable, as a separate line item, please identify the amount of leveraged funding used to support the activity. If leveraged funds were used to support the activity in previous program years, to the extent possible, please include those costs in the total broken out by program year.

TECHNICAL ASSISTANCE: Please describe any technical assistance resources used, training utilized or provided, and/or stakeholders engaged that led to the success of this activity.

BEST PRACTICES/LESSONS LEARNED: Please note any best practices or lessons learned.

LONG TERM IMPACTS: If applicable, please describe how the success of this activity will be sustained or built upon in future program years.

What changes are we making?

- **Summary of Updates:**

- **Reduced reporting burden** as States will only report on those activities where a verifiable impact occurred, an energy-related policy was adopted, or practices around emergency preparedness were improved;
- Opportunity to **identify technical assistance resources** used to support the activity;
- **Clarification** on how Annual Summaries are being used by DOE to communicate success; and,
- Increased opportunity to highlight **multiple-year efforts**.

We welcome your feedback!

Please let us know how we can better capture the great accomplishments you all do!

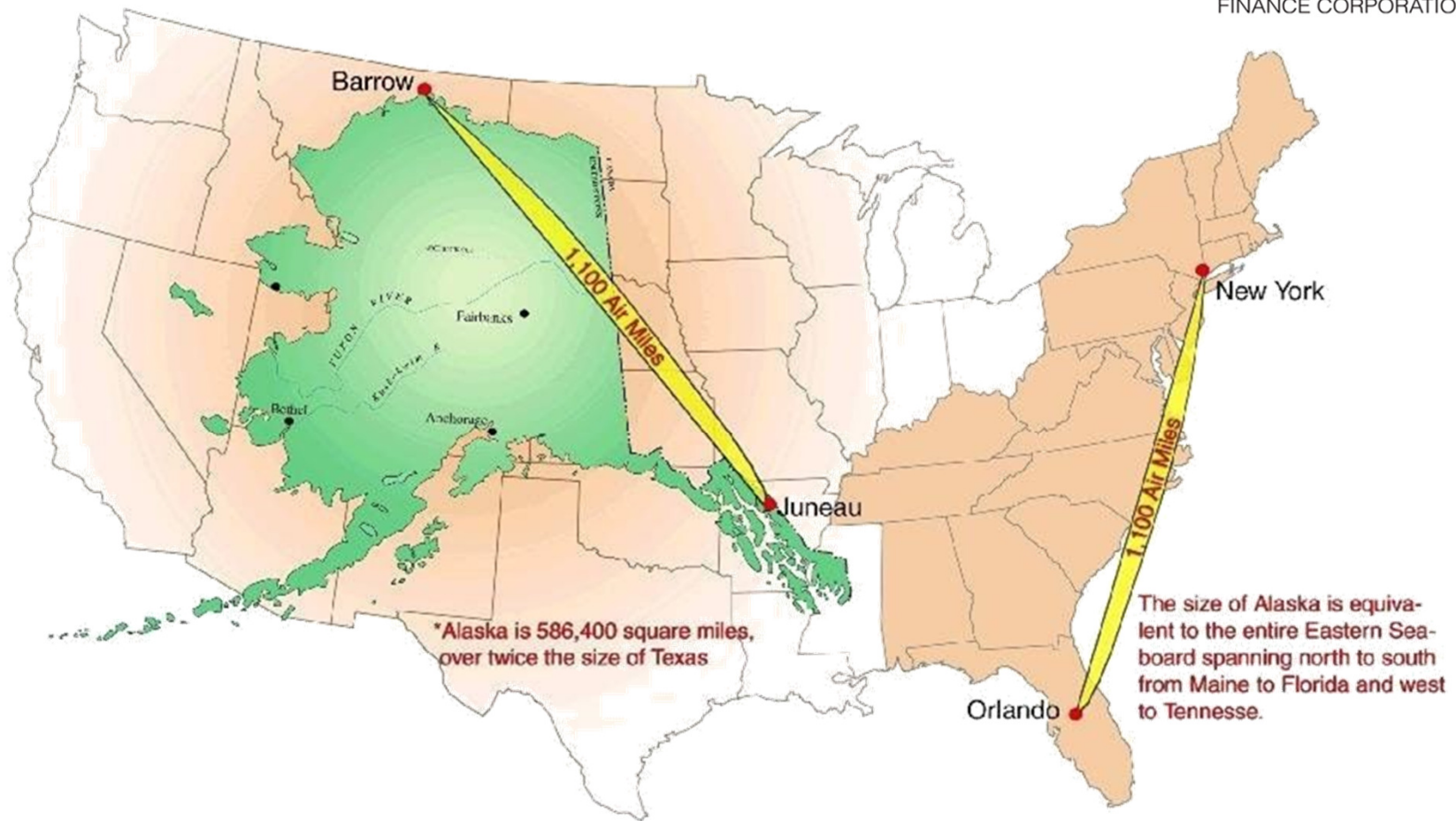
BMON and Me: Alaska's Success Stories

Michael Spencer
2019 SEP National Training Program
August 13-14, 2019





We are NOT located next to Mexico!



We are HUGE! With many different climates: Rain forest, Coastal, Boreal to Arctic Desert.



We can build anything!



\$1.01 / kWh

.46 / kWh



\$11.00 / Gallon

\$6.00 / Gallon



BMON- What is it?

- Hardware



- Software

```

1  #!/usr/bin/env python
2  """Fields (the user modifiable settings for the application.
3  """
4  import logging
5  # The unique ID of this particular logger, which will be prepended to
6  # sensor IDs.
7  LOGGER_ID = 'akia:chak_testing'
8
9  # The intervals for reading sensors and for logging readings
10 READ_INTERVAL = 5 # seconds between readings
11 LOG_INTERVAL = 10*60 # seconds between logging data
12
13 # ----- (Cellular Modem Related) -----
14 # Set following to True if you are using a USB Cellular modem
15 # to connect to the Internet.
16 USE_CELL_MODEM = False
17
18 # If you are using a cell modem, set the following to a string indicating
19 # the type of cell modem you are using. This string must be one of the
20 # "Dialer" sections in the wvdial.conf file found in the /boot/pi_logger
21 # folder (the folder also contains the Mini-Monitor settings file.)
22 # Currently, the following value are supported:
23 #
24 # E173: WORKS with the Huawei E173 modem
25 # E3276: Works with the Huawei E3276 modem
26 # E175GC: Works with the Huawei E175GC modem
27 #
28 # Mini-Monitor uses the Wvdial Linux utility to connect the cell modem
29 # to the Internet. The /boot/pi_logger/wvdial.conf is the configuration
30 # file for Wvdial and can be edited to modify configuration settings and/or
31 # enter new Dialer sections to support different models of modems. Also,
32 # the wvdial.conf file is set up with the APN of the 6CI Carrier in Alaska.
33 # (See the Init3 configuration settings). This can be modified for other carriers.
34 # See documentation of the Linux Wvdial program for further information on
35 # the configuration file.
36 # NOTE: some versions of the E175GC modem did not reliably connect using
37 # the current wvdial.conf settings. Use the E173 or E3276 modems if possible.
38 # *** This value must be in single or double quotes ***
39 CELL_MODEM_MODEL = 'E3276'
40
41 # -----
42
43 # Set following to True to enable posting to a BMON server
44 ENABLE_BMON_POST = True
45
46 # BMON URL to post readings to, and required storage key
47 # An example BMON URL is "https://bms.ah/c.us"
48 # The Store Key must match the Store Key in the settings file for
49 # the BMON server.
50 POST_URL = 'https://bms.ah/c.us/readingdb/reading/store/'
51 POST_STORE_KEY = 'e1dKNNd6e0yW'
52

```

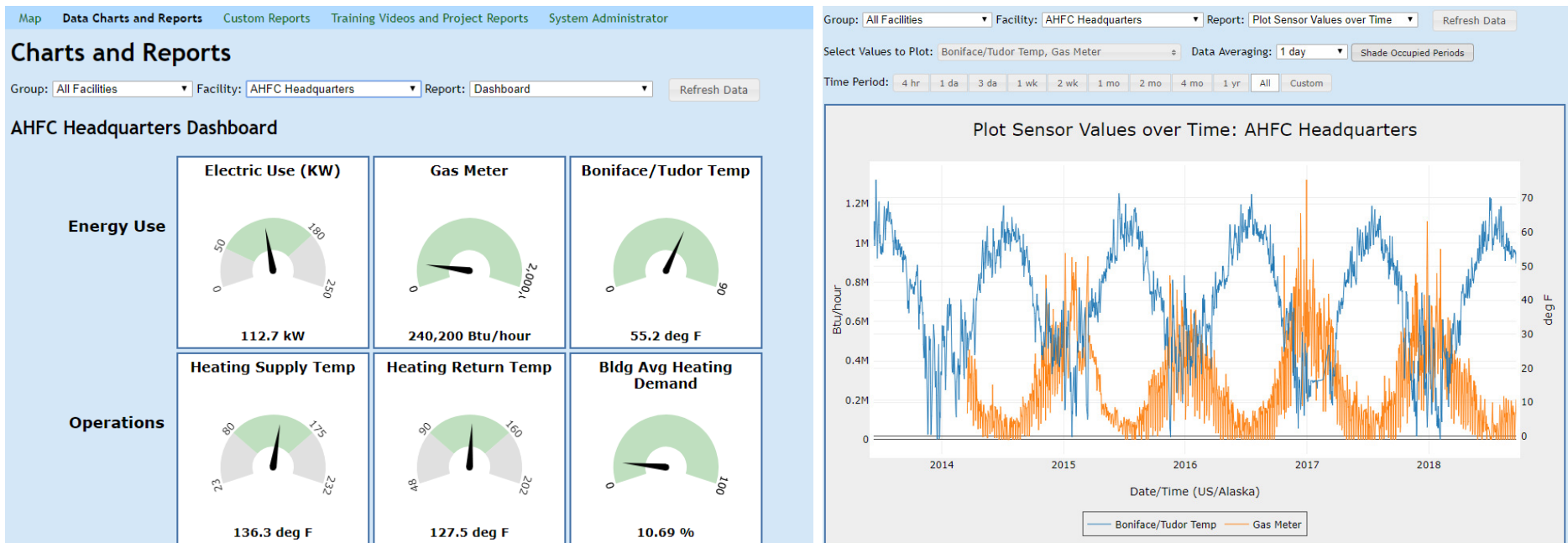

What to monitor?

- Utilities - Gas, electric, oil, water
- Flow rates
- Pumps
- Boilers
- Lights
- Temperatures



Can't Save what your not Monitoring

BMON - A low-cost monitoring system can streamline operations and maintenance as well as save you money

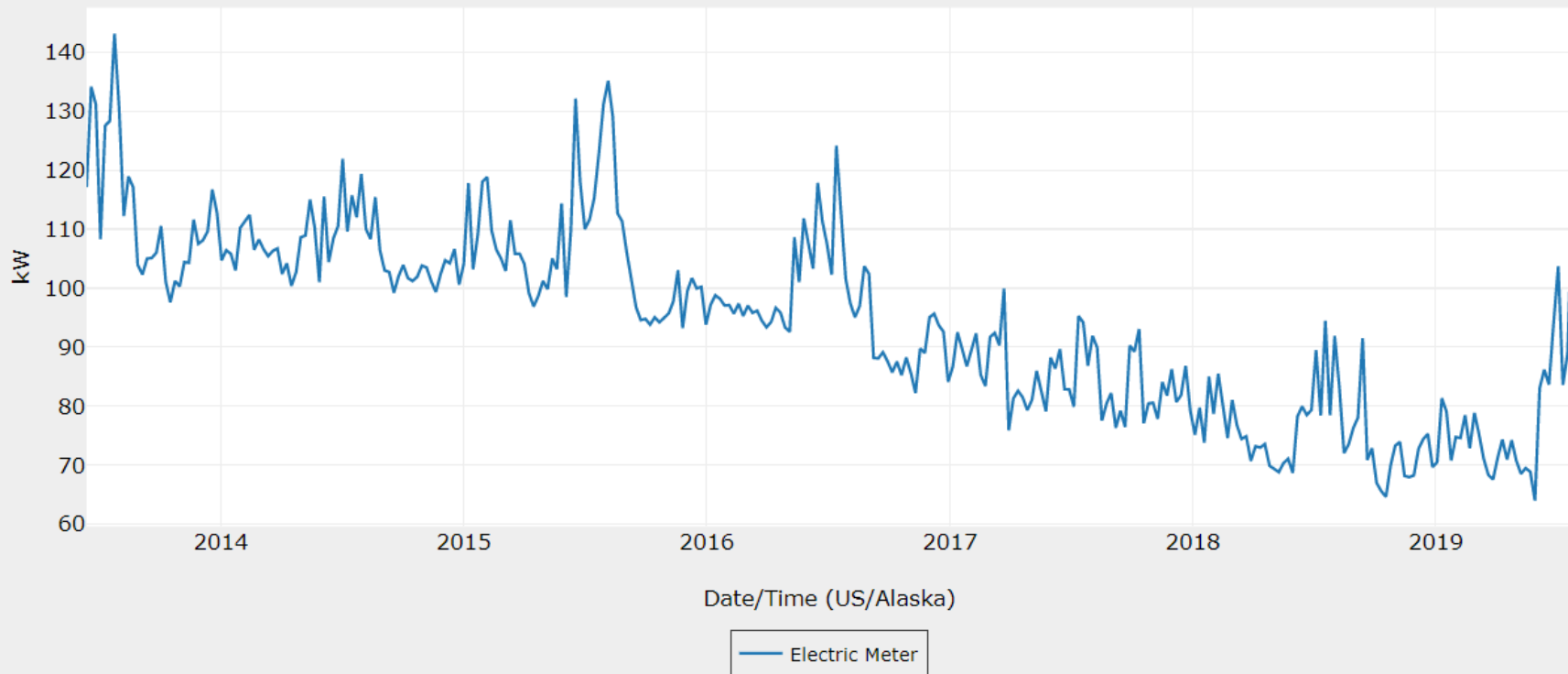


Uses/Advantages

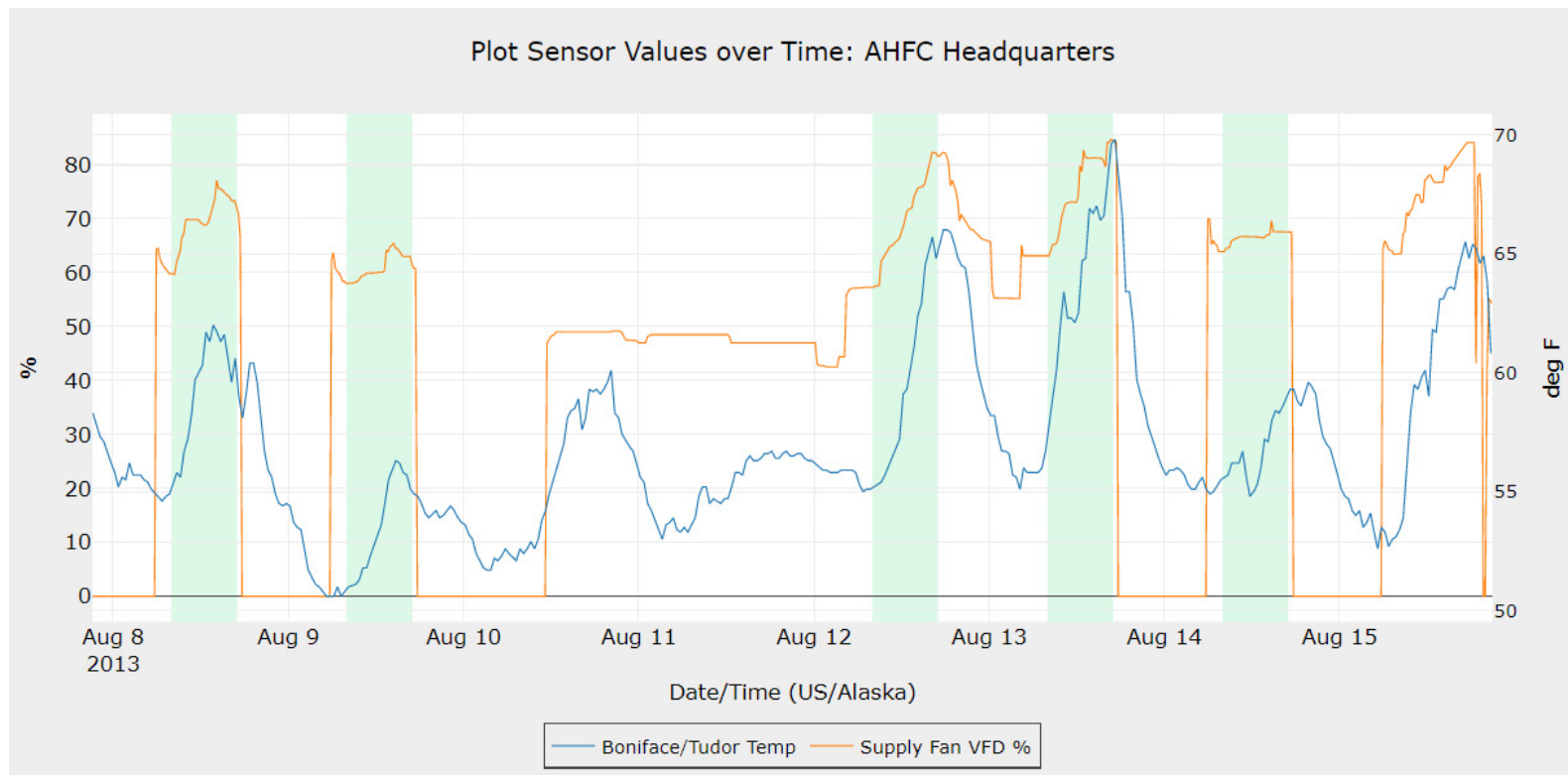
- Real time performance data on building operations
- Analysis of energy use
- Reduced maintenance cost and time
- Design Benefits – actual data for retrofit, rather than guesses – allows for proper sizing of equipment
- Single interface can link multiple inputs
- Weather stations, automation systems, sensors, other data bases
- Non proprietary – no subscription fees
- Open source
- Can be seen by multiple users

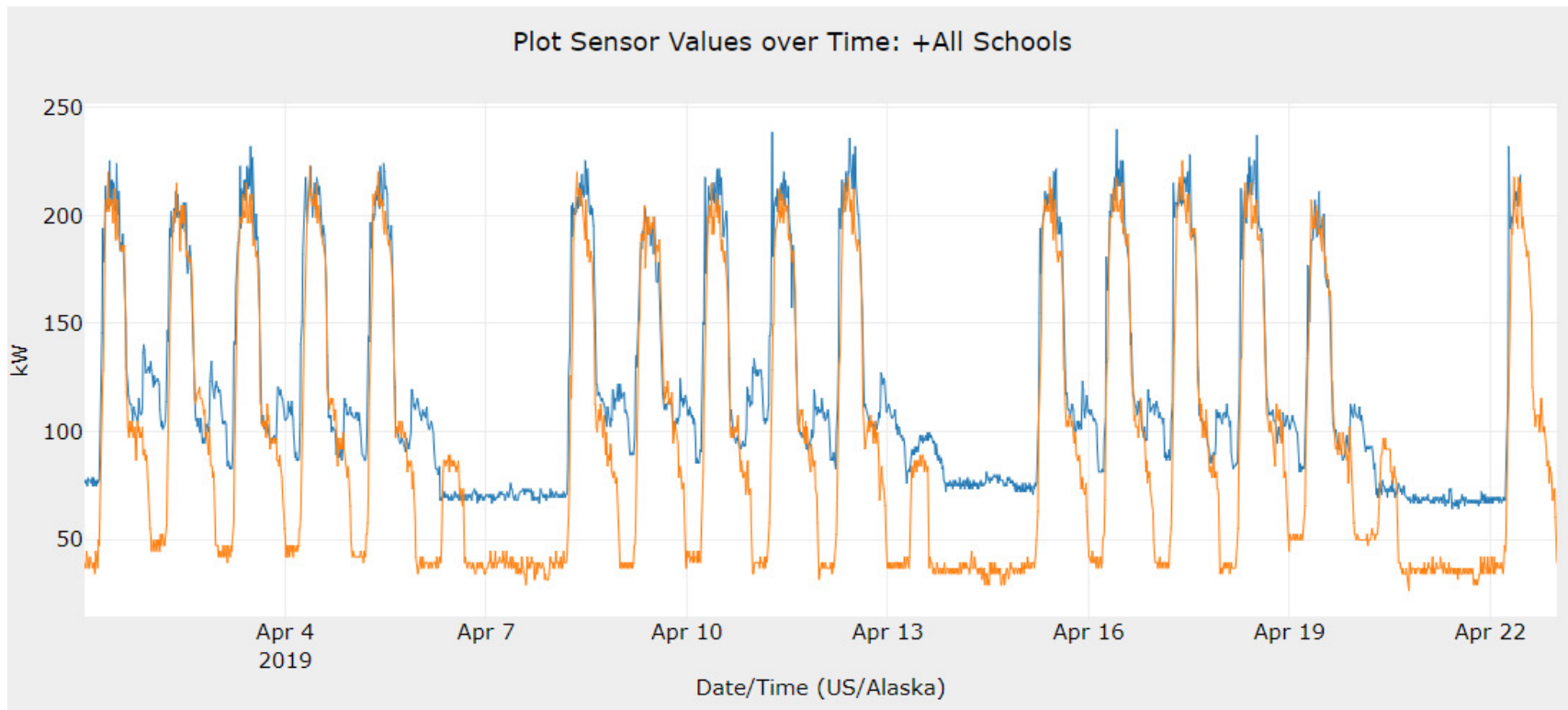
Our House....

Plot Sensor Values over Time: AHFC Headquarters



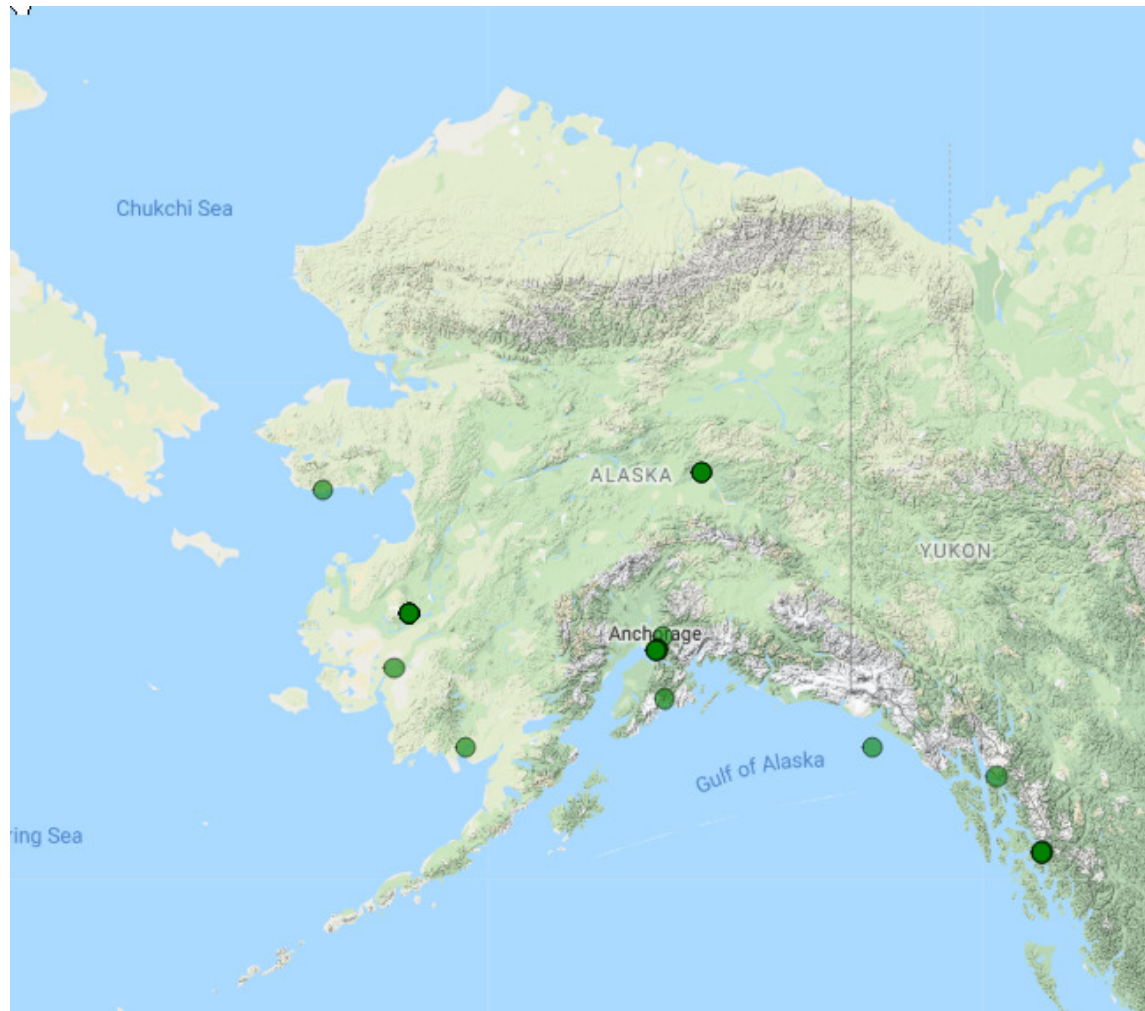
Just a little air.....





- Similar peak loads, very different baseloads

BMON Sites

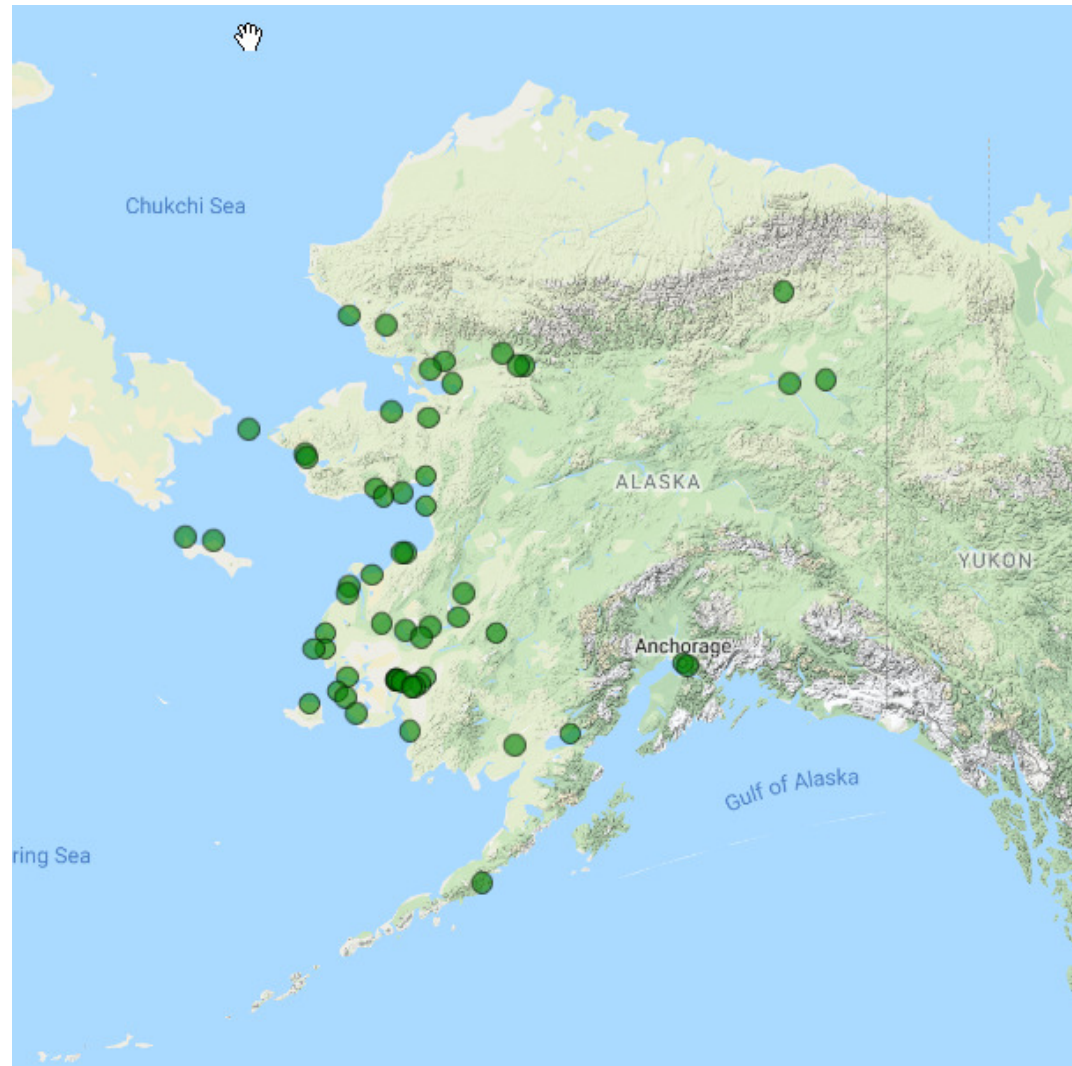


WORKFORCE EFFICIENCY

- Know what's going on before someone goes out to a building
- Response to complaints guided by actual information
- Identify the issue before bringing in specialists



Water and Sewer Plants



Thank you for joining me today!

Michael Spencer

Energy Programs Manager

Research & Rural Development Division

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www.ahfc.us

