Midyear Meeting Goals

PURPOSE: To provide ongoing clarity, consistency, and communication

• Update network on required policy changes & training activities
• Provide first glance at PY19
• Gather input on various planning efforts
INTRODUCTIONS

POLICY & STATE PLAN
• PY18 Updates:
  • Spending & PY19 Funding Projections
  • Healthy AIR & Multifamily Initiative
  • Training
  • Field & Administrative Monitoring Summary
  • FACSPro
• Policy Manual Changes
• Fiscal Review
• PY19 Preview

LET’S TALK SOLAR

IN CASE YOU MISSED IT
• Various topics
*NEW* Commissioner Steve Kelley

Deputy Commissioner Bill Grant

Program Leadership: Michelle Gransee & Jake McAlpine

Program Staff:

- Field monitors: Ivan Karnes, Bill Dixon, Rick Halvorson, Peter Gens
- Administrative monitors: Suzy Meneguzzo & Kellye Rose
- Training & technical assistance: Ben Tucker
- Leveraging Activities: (hiring)

Program Support:

- Fiscal: Jana Dietering & Donna Leonard
- WA support: Mark Fishbaugher (contract)
At your table:

• Share:
  • Name – Organization – Role - Mnemonic
  • Eg. Michelle – Commerce – SEO Manager - Meetings

• Around the table

• Around the room?

• Enter the Drawing
Midyear Meeting

PROGRAM UPDATE

PY18 Spending & PY19 Projections
Healthy AIR & Multifamily Initiative
Training Update
Field & Administrative Monitoring Summary
Policy Manual Changes
Fiscal Review
Spending Update (through December)

• USDOE
  • Total funding: $9.9 million
  • 35% spent

• EAPWX A2109
  • Total funding: $7.1 million
  • 29% spent

• Propane
  • Total funding: $430,000
  • 22% spent
Monthly Spending - July 2017 to present

- July 2017: $540,344
- Aug-17: $958,221
- Sep-17: $1,845,059
- Oct-17: $1,153,823
- Nov-17: $1,182,787
- Dec-17: $1,715,256
- Jan-18: $1,315,554
- Feb-18: $1,566,581
- Mar-18: $1,896,203
- Apr-18: $1,970,573
- May-18: $2,019,207
- Jun-18: $3,122,731
- Jul-18: $1,522,815
- Aug-18: $1,507,049
- Sep-18: $1,500,795
- Oct-18: $1,507,049
- Nov-18: $1,734,175
- Dec: $1,507,049
Quarterly Spending

- PY17 Q1: $3,343,624.56
- PY17 Q2: $4,051,866.50
- PY17 Q3: $4,778,337.44
- PY17 Q4: $7,112,511.01
- PY18 Q1: $5,051,011.15
- PY18 Q2: $4,742,018.65
WAP funding DOE vs HHS (5% EAPWX transfer)

- USDOE
- HHS
Looking Forward

Projected Spending Targets - A2110 (5%) & PY18 USDOE

<table>
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<tr>
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Looking Forward

Projected Spending Target (Q1 spending only A2109)
Funding End Dates

• DOE - 100% spent by 6/30/2019
  • Carry over possible at state level only

• EAPWX A2109:
  • 75% spent by 6/30/2019 – we are open to additional rollover upon request with a spending plan
  • 100% spent by 9/30/2019

• Propane - 100% spent by 6/30/2018
  • Excess balances will be reallocated statewide in PY18
• Audit Events: (July – Nov.)
  • USDOE
    • Completed jobs: 198
    • Goal 839: (24% of goal)
      • Spending in Q1 was largely focused on A2108.
  • EAPWX
    • Completed jobs: 477
      • 437 jobs in progress
  • Health & Safety Average:
    • DOE = $1,190
    • EAPWX = $2,477
      • Includes in progress H&S expenditures
## Healthy AIR Update

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**Total Funding Request:** $298,353

**Admin:** $19,500

**Program cost:** $278,853

**Unit average:** $7650

**% of unit count:** 100%
PY19 Healthy AIR considerations

• Possible changes to testing
• ACM vs Zonolite
• MDH Permits for all jobs
• Increased funds?
• Maintaining deferral lists is critical!
• Guidance documents posted in Appendix F:
  • Phase 1 include cost estimates and reserves funds
  • Phase 2 includes final costs and results in an NFA

• Funding can be utilized this program year or planned for use in PY19.
• Phase 1 applications for PY19 are due by 1/31/19.
• Currently 2 projects have approved Phase 1 applications: $302,00 of $683,000
Questions?
Midyear Meeting

TRAINING UPDATE
**Tier 1/Comprehensive Training Reminder**

**Inspection Requirements**
- USDOE requires the BPI HEP QCI certification to perform final inspections.

**Energy Auditor Requirements**
- USDOE does **not** currently require the BPI HEP EA certification to perform audits—audit requirements are a state level decision.
- Minnesota requires a BPI HEP QCI, BPI Building Analyst, or equivalent within one year of hire.
- Taking and passing the Dunwoody course is considered “equivalent.”
PY18: Midyear Policy Training Update

HEP EA New Certification Pilot Training and Testing, Fall 2018

• Eight of eight passed field test
• Six of eight passed written test

HEP Energy Auditor/QCI Training, Spring 2019

• Written test review and retakes.
• QCI training and 50 question written test *(Under the new certification scheme QCI is an add-on to the Energy Auditor certification. The Energy Auditor certification is the only prerequisite to sit for the 50 QCI written test).*
HEP QCI Training and Testing, December 2018

- Five of five passed both written and field tests
- These five are now in the same situation as all current QCI.
Building Analyst, Fall 2018

• Two of Four passed both written and field
• One retake in January, 2019

Additional Building Analyst Training Spring 2019

• March or April 2019: additional training and testing session at FDLTCC
Multifamily QCI

- Fall 2018, ten of ten QCI passed their Multifamily QCI course

WA Training

- August 2018, ten of ten passed the Weatherization Assistant course
PY18: Midyear Policy Training Update

2019 HPC National Home Performance
CONFERENCE & TRADE SHOW
April 1-4, 2019  Sheraton Grand Chicago  Chicago, IL

www.homeperformance.org/conferences/HPC19
Other Upcoming Trainings

• Home Performance Conference April 1-4, Chicago, IL
  • 65-70 Minnesota weatherization staff plan to attend

• MinnCAP 2019 Conference: July 23-25, 2019
  • Ben, Kris, and Lynn are participating on the MinnCAP conference committee.

• Mechanical Training: March/April 2019
  • HVAC Heating System Fundamentals, Combustion/CAZ, Ventilation

• FACSPRO Training dates TBD
Training and Technical Assistance Initiatives

• Client Education Materials
  • Working with internal staff who developed Home Energy Guide
  • Reviewers have been recruited

• Fiscal and Administrative Curriculum
  • Partnership with MinnCAP’s Fiscal Directors group to provide this training

• New Energy Auditor Development
  • Building Analyst certification will form the foundation combined with other trainings such as WA and mechanical training
Training and Technical Assistance Initiatives Modifications

- Training House (Large Training Prop) – on hold
- Contractor/Crew Training – First quarter of 2019
  - Focused on Mobile Homes and Air Sealing
  - Local and onsite
- Deck of Cards
  - Visually oriented instructions for installation of most common Wx Measures
Training and Technical Assistance Initiatives Modifications

• Health and Safety Curriculum and Training
  • Currently reviewing curriculum bids
  • Training target date first quarter of 2019
Questions?
Midyear Meeting
FACSPro
• Completed Elements
  • Budget and Fiscal modal
  • eHEAT Bridge
  • Monitoring & Issues Log

• Testing phase
  • Waiting list
  • Deferral list
• Audit & QCI Process
  • Incorporation of WA
    • WA working group met twice this fall
  • Mobile App
    • DBA working group in process now
    • 2 day site visit to Dakota for audit and QCI
    • Contractor portal
  • Work orders/change orders
  • Reports
• Other items
  • WA libraries unified measures list
  • Forms/Client file
• These elements are the main focus for the remainder of the year.
• Training this spring with DBA
• Launch July 1, 2019
Midyear Meeting
Policy Changes

Reasons & Approach
Section by Section Updates
• **Goal**: To review changes and clarifications made to the WAP Policy Manual, including existing policy reminders

• **Reason for midyear changes**:  
  - Recommendations made by USDOE  
  - Clarifications needed as identified through frequent questions or discovery of errors

• **Approach to policy changes**: annually at the onset of each program year, midyear as needed
• No substantive changes
3.1 Proof of Ownership – Owner Occupied Dwellings

**POLICY:** In addition to verifying income eligibility in eHEAT, Service Providers must verify home ownership and must document ownership in owner-occupied household files.
4.4.2.1 Heating System Plant Replacement

“Heating Plant Replacement” subdivision title added

“Water Heater Replacement” subdivision and title added

POLICY: In the case of a water heater replacement, backflow prevention and expansion tanks will be added when required by the authority having jurisdiction. If backflow prevention is added, a potable water expansion tank must also be added. (USDOE approved variance to SWS 7.8102.2e, 7.8102.2h, and 7.8103.1)
4.4.2.7 Asbestos

**POLICY:** Service Providers must take steps to identify Presumed Asbestos Containing Material (PACM) that would be disturbed during the course of normal weatherization activities. Handle PACM situations as per the Minnesota WAP Health and Safety State Plan and all rules and regulations outlined by the Minnesota Department of Health [http://www.health.state.mn.us/divs/eh/asbestos/prof/index.html](http://www.health.state.mn.us/divs/eh/asbestos/prof/index.html).

- When a material within the pressure boundary of the dwelling is suspected of being a PACM and is friable, blower door testing is not allowed until the friable material is either confirmed to be a non-ACM or it has been encapsulated or remediated.
- If a material is suspected of being PACM, the material must not be disturbed. If the suspect material must be disturbed through the normal work of weatherization, it should be abated or encapsulated.
4.4.2.11 Replacement of Compressed Attic Insulation

**POLICY:** In cases where attic insulation is compressed due to weatherization work and adding attic insulation does not achieve an SIR of 1.0 or greater in WA, replacement insulation can be added to return the attic to its original insulation level. There is a $200 limit per dwelling and the cost must be included in the attic measure that caused the insulation compression. Bag counts must be recorded by the contractor/crew and verified by the QCI.
4.4.3.2 Change Orders

A change order, including the reason for the change, is required when the scope of work (measures or their costs) deviates from an issued work order. The Change Order Form must reflect the updated scope of work and be included in the client file...
4.5.3.1 Mechanical Contractors *(Combustion safety testing requirements apply only to combustion appliances)*

**Gas Pressure Test** - on replacements, clean and tune, or repair *(8.5 MN Weatherization Field Guide - SWS Aligned Edition)* Gas pressure testing is required only in cases where a mechanical contractor will go to the home as part of weatherization work. *(USDOE approved variance to SWS 5.3003.14a).*
4.5.3.2 Building Shell Contractors/Crews (Combustion safety testing requirements apply only to combustion appliances)
4.6.4 Final Inspection Not Completed Client Refusal of Final Inspection

**POLICY:** *In cases where a final inspection cannot be completed due to a variety of scenarios...*

No change to existing policy, only the policy title was changed.
5.1 Definition

*If there is a life-threatening situation, EAPWX funds are available and LIHEAP’s ERR funds are not available; budgeted EAPWX Standalone funds must be used;*
5.2 Standalone Events - Health & Safety/Measure Type

New Language:
CO alarms and smoke detectors will be added when required by code as part of an appliance replacement or repair.
5.6 Mechanical Contractor *(Combustion safety testing requirements apply only to combustion appliances)*
6.2.2 ...LIHEAP Funds

EAPWX awards are typically allocated annually on or before the start of the WAP Program Year (July 1) and after the LIHEAP funds are awarded to the MN Department of Commerce. The EAPWX allocation covers the time remaining until September 30 of the following year.

When the initial allocation is made, 90% of the EAPWX funds will be immediately assigned to Service Providers. The remaining 10% will be held in reserve to be allocated on July 1 of the following year. The reserve allocation is intended to cover July 1 through September 30 (the “fifth quarter”). If Service Providers spend more than the 90% during the program year (July-June), they may ask for the remaining 10% to be assigned to them when needed.
6.2.2 ...LIHEAP Funds - Continued

On July 1, the originally unallocated 10% will be distributed to Service Providers, while any un-spent balance from the original 90% allocation will be disseminated after a final fiscal reconciliation occurs. Final reconciliations are typically completed within 45 days of the end of the program year.

Carryover of funds may be allowed for the EAPWX program; these funds must be spent by September 30. The maximum carryover allowed is 25% of the total EAPWX allocation. Un-spent balances of more than 25% may be de-allocated. Any requests to carryover more than 25% of funds must be submitted in writing on or before June 15 annually.
6.4 Financial and Program Report Submissions

POLICY: Service Providers are required to submit monthly FSRs in FACSPro by the date prescribed in the WAP contract reporting section. A separate FSR is required for each federal and state fund. FSRs are required even if zero expenses have occurred in the month reported. The FSR must be reviewed by both the Program Manager and the WAP Fiscal Manager/Staff Person prior to submission.

If monthly FSRs are not submitted by the due date, Commerce may choose to hold funds until FSRs are submitted. If unforeseen circumstances will prohibit on-time FSR submission, Service Providers may request an extension to the submission deadline. Requests for consideration must be sent in writing to Commerce before the end of business on the due date.
6.6 Financial Closeout

... Packages must be submitted in FACS{ro no later than the close-out due date and include the following:

...

Service Providers must verify that the cumulative total of fund payments received matches the cumulative total of expenditures reported on the final FSR
6.8.1 Fund Categories

POLICY: The original allocation of Admin and TTA funds cannot be increased. Admin and TTA funds may be moved to Program, in order to complete more units.

To request a budget revision.... Service Providers must submit any request to Commerce on or before June 15 (or September 15 for an expiring EAPWX fund).
6.9.2.1 Allowable Training and Technical Assistance (TTA) Expenses

All training activities paid for with TTA funds (including training for Program, Administrative and Fiscal staff)

Fiscal Staff training: Any Fiscal staff who works on the Weatherization program must attend initial training on OMB Guidelines within one year of working with the Weatherization program. In addition, staff must take refresher courses within one year of changes to the OMB Guidelines.
7.1 Competition

**POLICY:** All procurement transactions must be conducted in a manner to provide, to the maximum extent possible, free and open competition...

All job costs must come from a Set Price list or bid with an exception for small purchases as below:
For Weatherization jobs where the aggregate dollar amount does not exceed $1,100, no competitive bids are required if it is determined the price is reasonable.

Determination of “reasonable” should be set by the agency using past experience, local job quotes, or other reasonable pricing mechanisms.
Section 7 – Procurement

7.1 Competition

**POLICY:** All procurement transactions must be conducted in a manner to provide, to the maximum extent possible, free and open competition...

Service Providers may use Minnesota’s Cooperative Purchasing Venture (CPV) to procure contractors, equipment, and services as needed. Using the CPV eliminates the need to go through the solicitation, competitive bid and bid analysis process. All other WAP program rules and regulations are applicable to contractors, equipment, and services, including the requirements covering contractor eligibility. For further information on Minnesota’s CPV, see the CPV [website](#).
7.3 Solicitation

Solicitations for goods or services must provide the following:

...2 CFR 200.319 explicitly prohibits wording restricts competition or unduly limits competition;
Specifically prohibited wording includes descriptions which include a “brand name” product without including “or equal”. See the OMB Guidance for further information;
7.4.2 Contractor Eligibility

11. When working with all Presumed Asbestos Containing Materials (PACM), follow federal and local rules pertaining to asbestos;

12. When undertaking vermiculite-related projects, follow all Healthy AIR rules and guidance, including:
   a) Receive required training and maintain up-to-date asbestos abatement Contractor and Firm certifications;
   b) Pull required permit with Minnesota Department of Health;
   c) Handle all vermiculate as a PACM.
7.4.5 Set Price Lists

**POLICY:** Once contractors have been procured through a formal and documented bidding and evaluation process, set price lists for services and materials may be established as an alternative to bidding by job. Set price lists may be made for any or all measures performed by WAP contractors.

- The goal of the Set Price list is to add efficiency to the procurement process by bidding work once at the beginning of the Program Year rather than per job through-out the year. This process must adhere to the open and fair procurement regulations for solicitation and bid analysis. See sections 7.2 Solicitation and 7.3 Bid / Cost analysis;
- Set price lists are valid for use for 1 contract year, with an option to extend the applicability for two, 1-year periods;
- To ensure market fairness and compliance with federal and state procurement standards, procedures must be established delineating the process and frequency of price review and renegotiation;
7.4.5 Set Price Lists - Continued

• The Set Price list must have a labor and materials breakdown in order to satisfy Policy 4.4.3 which requires that work orders include a labor and materials split based on either a bid or Set Price list;
• The Set Price list will include as many tasks or items as practical with the understanding that tasks not represented must be solicited and bid per the policy manual;
• The Set Price list may take in to consideration geography; for example, contractors may limit the area they will serve for a certain price;
• No substantive changes
Midyear Meeting
Appendices & Forms Updates
Field Guides:

- Updated SWS Aligned Field Guide now posted on the Commerce website
- New field guide goes into affect January 17, 2019
- Agencies should review implement the changes found in the document *Field Guide Changes 2018*
- Multifamily Field Guide (taken directly from the SWS will be posted on the Commerce website)
Field Guide Changes include:

• 35 embedded training videos
• 33 additions and updates to reflect 2017 SWS
• Small changes to SWS references
• Five Minnesota Specific changes
Training video topics include:

• Air Sealing
• Two part and one part foam
• Installing water heater wrap
• Mobile home duct sealing
• Mobile home roof cavity insulation
Examples of 2017 SWS additions to the field guide include:

- New photos detailing moisture problems
- Section on roof top air handler units

Examples of 2017 SWS changes to the field guide include:

- Strong preference for LEDs over CFLs
- Differentiation between single family and multifamily ventilation systems
Appendix B, Field Guides

Additional Minnesota Specific Changes:

• Table 1-1 MN Wx Gas Range Safety Policy says “stove-top burner testing not permitted.”
• 4.2.1 Use mechanical fasteners to secure insulation baffles.
• 8.2.3 Removed sentence about CO limits for DOE and BPI. *(BPI 1200 CO limits in A-5)*
• 10.3.1 Removed references to CFLs since MN isn’t installing them anymore.
• Entire guide: MSDS is now just SDS. ASHRAE 62.2-2016 rather than 2013.
SWS Variances:

• Redline Version of “DOE Approved SWS Variances” is now posted on the Commerce website

• Goes into affect January 17, 2019

• Agencies should review implement the changes found in the document “DOE Approved SWS Variances.”
Appendix B, SWS Variances

- Minnesota did not request additional SWS variances

- Many previous SWS Variances are no longer necessary because of clarifications in the 2017 SWS Updates.
  - These are noted in the DOE approved SWS variances document
  - Some of these changes we have kept and placed elsewhere in our policy, for example backflow prevention devices and potable water expansion tanks.

- Other variances have been re-approved
Appendix D, Required Tests

Required Tests

• **Audit Event – Energy Audit** – For water heater and heating plant tests
  • *(Combustion safety testing requirements apply only to combustion appliances)*

• **Audit event – QCI** – This policy was previously found in SWS variances and is now found in Appendix D
  • *(Insulation will be verified to prevent visible air movement using chemical smoke at 25 PA of pressure difference at a distance of 1 inch, or by infrared camera used in conjunction with a blower door when weather conditions allow for a greater than 10 degree difference between inside and outside temperatures)*
Questions?

Policy Manual Changes
• What is the name of the new Minnesota Department of Commerce Commissioner?

• How many homes were completed in the first round of Healthy AIR?

• What city is the HPC conference in this year?
Midyear Meeting
Looking Forward – PY19
• Grant guidance and application instructions for the PY19 WAP State Plan

• Adjusted average expenditure limit for PY19 is $7,541
  • up from $7,261 in PY18.
2.1 ROOF REPAIRS, WINDOW REPLACEMENTS, AND MOLD

*DOE is actively working on updating its policies on using WAP dollars to address roof repairs, window replacements and mold abatement, and plans to issue guidance on these issues early in 2019.*
2.2 AMERICAN CUSTOMER SATISFACTION INDEX

In PY 2019, DOE will implement another ACSI survey with WAP Grantees and Subgrantees to gather constructive feedback on where improvements have been made and identify areas where there is still opportunities for improvement.
2.6 HEALTH AND SAFETY

Health and safety for both workers and occupants continues to be a top priority for DOE. Over the years, a number of new standards and concerns have been addressed to ensure that weatherization activities do not cause or exacerbate health and safety problems.

Grantees should review this document and provide the necessary training and technical assistance to Subgrantees to fully implement the requirements outlined in the guidance.
2.8 QUALITY WORK PLAN IMPLEMENTATION

DOE continues working with Grantees and Subgrantees to ensure that independent, third-party quality control inspections are conducted on every Weatherized home and results are shared with relevant parties.

Grantee, Subgrantee and Contractor staff who repeatedly fail to perform to Program expectations must be disqualified from performing work in the future. **Grantees must establish protocols to remove poor performers in their network.**
Weatherization Program Notice 19-2

MN Allocation

• T&TA: $1,794,302
• Program: $9,396,069
• Total: $11,190,371
PY19 State Plan – Multifamily Initiative

• Remaining amount estimated $380,000

• Due date for Phase 1 Applications is 1/31/2019
PY19 State Plan – Mobile Home & Air Sealing

• USDOE requirement to insulate mobile home bellies and attic

• There is lack of contractor experience in some areas of the state

• Commerce will be conducting on site trainings around the state
  • Mobile home insulation
  • Air Sealing
*Proposed* PY19 State Plan Initiatives

PY19 State Plan

• Leveraging position

• Clean Energy Resource Teams

• Funding Initiatives
  • Healthy AIR
  • Other deferrals

• Xcel Energy
*Proposed* PY19 State Plan Initiatives

**PY19 State Plan – Solar Pilot**

- Use of state carry-forward (training / admin dollars)
- Estimate $150-$250K
- Pilot Program
- Due date for allocation request – 2/15/2019
State Plan Schedule

- Nov/Dec 2018 – Explore solar with PAC/SPs
- January 2019 – Propose 2019 initiatives
- February – Finalize budget and allocations
- March – Finalize state plan
- April – Hold public hearing
- May 1 – Submit final USDOE state plan
- June – Complete contracting process

C/SPs

USDOE monitoring visit Summer 2019
Questions?

Looking Forward
BREAK
Midyear Meeting
FISCAL UPDATE
Topics

• Concerns and Effective Solutions
• Review of Due Dates
• Review of Policy Manual Changes
Late Submission of Final FSRs and Cash Requests

• Description
  • Staff absent on due date
  • Staff not aware of due date
  • Status of FSRs and cash requests are not monitored
  • Lack of clear responsibilities
Late Submission of Final FSRs and Cash Requests

• Impacts
  • Negative Impact on the Service Provider’s Risk Assessment
  • Potential Audit Finding
  • Final Cash Request might not be honored and WAP expenses will have to be covered by corporate funds
Late Submission of Final FSRs and Cash Requests

Solutions
Late Submission of Final FSRs and Cash Requests

• Solutions
  • Review Closeout Instructions in the Policy Manual
  • Review WAP Wire for additional closeout notes
  • Set a date prior to the due date to review closeout instruction with fiscal staff and determine responsibilities
  • For unforeseen circumstances send Commerce a written request for due date extension
Incorrect Final FSRs

• Description
  • Total expenditures exceed total allocations
  • Totals entered in wrong budget categories
  • Total expenditures exceed budget limits
  • Total expenditures don’t match total of cash requests/payments
  • Totals not matching general ledger balance totals
Incorrect Final FSRs

• Impacts

  • Expenses are misrepresented
  • Financial Statement is misstated
  • Incorrect projections for the next program year
  • Could lead to single audit findings
  • “excess” budget amounts have to be covered by corporate funds
Incorrect Final FSRs

Solutions
Incorrect Final FSRs

• Solutions
  • Implement process of two staff members (ideally one fiscal and one program) to review final documents before submission
  • Have discussions regarding any unusual expenditures – make corrections if needed
  • Compare totals of FSR with GL balance totals
  • Check federal regulations and WAP Policy Manual for budget limits
Lack of Knowledge of Available Resources

• Description
  • Staff is not aware of available resources that can be utilized managing WAP
  • Training materials are not readily available
Lack of Knowledge of Available Resources

• Impacts
  • Mismanagement of the Weatherization Program
  • Negative Impact on Monitoring Report and Risk Assessment
Lack of Knowledge of Available Resources

Solutions
Lack of Knowledge of Available Resources

• Solutions
  
  • Every key staff working with WAP should have a WAP Policy Manual
  
  • Federal Regulations 2 CFR Part 200 is a great source for federal regulations and allowable costs
  
  • WAP Tac is a website that gives valuable information regarding the management of WAP
  
  • WPNs are Weatherization related publications issuing regular updates on federal regulations
Lack of Cross Training and Transfer of Knowledge

• Description
  • Lack of a comprehensive fiscal Policy and Procedure Manual
  • Lack of available staff to cross train
  • High turnover of fiscal staff prevents a smooth transition
Lack of Cross Training and Transfer of Knowledge

• Impacts
  • Mismanagement of Weatherization Program
  • Incorrect and harming procedures get implemented
  • Valuable knowledge gets lost
Lack of Cross Training and Transfer of Knowledge

Solutions
Lack of Cross Training and Transfer of Knowledge

• Solutions
  • Find opportunities for cross training between fiscal and program staff
  • Create comprehensive internal Policy and Procedure Manuals as well as a Contingency Manual
  • Use the network group as a valuable resource of knowledge
  • Utilize T & TA funds to attend fiscal trainings as necessary
Unspent Funds

• Description
  • Service Providers report unspent funds on their final FSRs
  • Service Providers weren’t aware they can move some funds into different categories
• Impacts
  • Will negatively influence Risk Assessment
  • Community is not being served to its full capacity
  • Federal grants may decrease in the future
Solutions
• Solutions

• Prepare thoroughly for the quarterly calls with the WAP team to address unspent funds as early as possible

• Have team meetings to review budgeted versus actual numbers and address any variances accordingly
Fund End Date Reminders

• PY18 USDOE, Propane, Healthy AIR
  • ends 06/30/2019

• EAP WX A2109:
  • ends 09/30/2019

• EAP WX A2110:
  • ends 09/30/2020
A final FSR and final Cash Request for each fund has to be submitted on or before:

- **PY18 USDOE, Propane, Healthy AIR:**
  - 07/30/2019

- **EAP WX A2109:**
  - 10/30/2019

- **EAP WX A2110:**
  - 10/30/2020
• Attempt to improve communication and expectations and address prevalent issues
• Adding additional language for more clarifications
• Update for any federal regulations
Questions?

Fiscal Update
Midyear Meeting
Monitoring Summary
• Fully staffed
  • 2 admin, 4 field

• 5% vs 10%
  • Training in Q1 & Q2
  • Follow-up
  • Integration with T&TA
• 9 visits so far this year

• Items to note:
  • Set Price List - need to breakdown materials/labor,
  • Work order prices must come from a bid or set price list
  • Fiscal Verification - consistency between bid/set price list, work order, invoice, WA
  • Need for clarity in bid solicitation and analysis process (bid analysis)
Items to note:

- Service to renters (underserved)
- Missing landlord policies
- Client privacy issues - other client info in household files
- Contracts not containing SWS receipt page
- Contractor files - incomplete or out of date
• 51 units monitored so far

• Items to note:
  • Missing Radon forms
  • Incomplete Change Order forms
  • Otherwise, no consistent theme
Questions?
Let’s talk solar

Michelle Gransee | SEO Manager – Clean Energy & Programs

Jack Kluempke | Solar Financing Specialist
Minnesota’s solar market is transforming

MN Solar Capacity:

98% of solar installed since 2013

15 MW_{AC} in 2013 to 796 MW_{AC} today

solar capacity nearly tripled, from 201 MW_{AC} of solar in 2016, to 596 MW_{AC} in 2017

Minneapolis's Solar Capacity - Projected as of December 2018 (*preliminary)

Cumulative (MW_{AC})

Source: MN Dept of Commerce

1/24/2019 mn.gov/commerce
Minnesota’s solar market is transforming

MN Solar Capacity:

#6 for new solar in 2017

Over 440 MW_{AC} community solar
(as of Sept 2018)
Solar Energy COST: 99% Drop SINCE 1977

1977 - $76.67/watt

2014 - $0.67/watt

Source: Bloomberg New Energy Finance
Why WAP + Solar?

• Less than 6% of solar programs = LI HHs
• Additional market barriers
• Ability to leverage (Xcel)
• Xcel often leads (ie. 30 CSG programs)
• **Not about solar – it’s about energy burden**
Initial Efforts

- Pre-Assessment Solar Session
- PAC Meeting on WAP
- Service Provider meeting on Solar
- Plan Pilot Proposal
- Meeting with Broader LI Community
### Xcel Energy’s LI Solar*Rewards Program

<table>
<thead>
<tr>
<th>Residential Systems</th>
<th>2019 Incentive/Production</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-Income Residential</td>
<td>$0.07</td>
<td>$2.00</td>
</tr>
<tr>
<td>Low-Income Non-Profit and Multi-family (serving low-income customers)</td>
<td>$0.06</td>
<td>$1.00</td>
</tr>
<tr>
<td>Low-Income Solar Garden</td>
<td>$0.06</td>
<td>$0.50</td>
</tr>
<tr>
<td>Commercial Systems (including Solar<em>Rewards with Solar</em>Rewards Community Gardens)</td>
<td>$0.06</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Solar in Minnesota

Jack Kluempke, Solar Financing Specialist, Division of Energy Resources
Solar Technologies

Three primary methods to harness energy from the sun for building use:

- Passive Solar Design
- Thermal Systems
- Photovoltaic (PV) Systems
Solar Technologies

Three primary methods to harness energy from the sun for building use:

• Passive Solar Design
• Thermal Systems
• Photovoltaic (PV) Systems

*What's your knowledge level?
Passive Solar Design

• Passive solar is incorporated into a building's design to collect, store, and distribute solar energy as heat throughout a building.
Solar Thermal Systems

Solar Thermal harnesses solar energy to heat water or air used in a building.

Typical uses are for domestic hot water and space heating.
Solar Thermal Systems

- Collector
- Storage
- Distribution
In 2018, a new solar project was installed in the U.S. every 100 seconds according to SEIA.
Photovoltaic System (PV)

- Direct Current (DC) electricity
- An inverter converts the DC to AC
- No moving parts
- Little maintenance
- Lasts for decades
Typical PV System

**PV Array:** Sunlight passes through the silicon wafers of the PV modules creating Direct Current (DC) electricity.

**Combiner Box:** The PV modules are wired together in a combiner box to deliver the correct DC system voltage.

**DC Disconnect:** Required by code, this box combines system shut-off switch, circuit breakers, and ground fault protection to ensure that all parts of the system can be disconnected.

**Inverter:** Direct Current (DC) from your array is converted to Alternating Current (AC) to power your home or business or to sell energy back to the grid.

**AC Main Panel & Meter:** Tracks your grid energy consumption and your solar production. Net metering means you pay the power company the difference between the two.

**AC Disconnect:** Alternating Current (AC) from the grid and from your inverter can be disconnected here.
Roof Mount Installation
String Inverter With DC Optimizers

DC Optimizers
String Inverter
Production Meter and Disconnect
Roof Mount Installation - Micro Inverters

Installing Stand-Offs and Roof Flashing

Installing Rails

Micro Inverter
What makes a good solar site?

• Southerly orientation
• Free from shade between 10 AM & 2 PM
• Tilt between 20 & 45 degrees
• Structurally sound
• 200 Amp service
• Room for BOS
• Participating Utility
Pre Audit Checklist

HH#___________________ Date:_______________

Prepared by:_______________________________________

Pre-Audit Check List:

- Is this a potential site for solar?
  - Roof Mount:  ___ Yes    ___ No
  - ___ South Facing Azimuth (120 to 240 degrees):
  - Pitch: _____
  - ___ Free from obstructions (large rectangular area 10’ x 10’ min.)
  - ___ Minimum Shading
  - ___ Structurally Sound
  - ___ Engineered Trusses Rafter Spacing: _____
  - ___ Age of Shingles (10 – 15 years of remaining life)
    - If not asphalt shingles what: _________   ___ No soft spots
  - ___ Rafter Spacing: _____
    - 15 years of remaining life)
  - ___ shingles what: _____   ___ No soft spots

1/24/2019
Solar

utility meter for BOS? (4’ x 4’)

_________________________________________
This guide is available online at:


Or just Google Standardized Load Tables.
Production Based Incentive (PBI)

an incentive paid based on the
Up-front Incentive

- System is installed
Electric Charges Usage Period: 11/20/12 to 12/25/12
Invoice #452426177
Res Underground 35 Days
Basic Service Charge $9.11
Affordability Charge $0.50
Energy Charge Winter 1369 kWh @ $0.069750 $95.49
Fuel Cost Charge 1369 kWh @ $0.028386 $38.86
Resource Adjustment $5.67
Subtotal $149.63
City Fees @ 3.00% $4.49
City Tax @ 0.50% $0.77
State Tax @ 6.875% $10.60
Total Amount $165.49
### Net-Metering

**Res Underground 35 Days**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Service Charge</td>
<td>$9.11</td>
<td>$9.11</td>
</tr>
<tr>
<td>Affordability Charge</td>
<td>$0.50</td>
<td>$.50</td>
</tr>
<tr>
<td>Energy Charge  Winter 369 kWh @ $0.069750</td>
<td>$95.49</td>
<td>$25.74</td>
</tr>
<tr>
<td>Fuel Cost Charge  369 kWh @ $0.028386</td>
<td>$38.86</td>
<td>$10.47</td>
</tr>
<tr>
<td>Resource Adjustment</td>
<td>$5.67</td>
<td>$1.53</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$149.63</td>
<td>$47.35</td>
</tr>
<tr>
<td>City Fees @ 3.00%</td>
<td>$4.49</td>
<td>$1.42</td>
</tr>
<tr>
<td>City Tax @ 0.50%</td>
<td>$0.77</td>
<td>$0.24</td>
</tr>
<tr>
<td>State Tax @ 6.875%</td>
<td>$10.60</td>
<td>$3.26</td>
</tr>
<tr>
<td><strong>Total Amount</strong></td>
<td>$165.49</td>
<td>$52.27</td>
</tr>
</tbody>
</table>

*Net-metering of 1000 kWhs on my house*

* Savings above the kWh savings or the retail rate*
WAP & Solar - Opportunities
“...to increase the energy efficiency of dwellings owned or operated by low-income persons, reduce their total residential energy expenditures, and improve their health and safety, especially low-income persons who are particularly vulnerable such as the elderly, the handicapped, and children.”

- Energy Conservation in Existing Buildings Act of 1976
DOE WAP Memorandum 024

• Creates a streamlined path for approval into the program.

• Outlines the steps for approval
  • State Request- Accurate and complete SIR calculation
  • PV modeling runs in NEAT
  • NEPA Assessment

• Sets considerations for piloting solar

• Provides resources for assistance

*See also DOE WAP Memorandum 035- Leveraging vs. Buy-down
DOE WAP Stipulations

- DOE approved, site-specific audit(s) must be executed and be used in tandem with solar site analysis to justify cost-effectiveness.
- No structural improvements may be made beyond necessary and must not be ground mounted. Each system is to be net-metered and cannot exceed 5kW.
- DOE Project Officer must approve each installation.
- State must comply with Section 106 of national Historic Preservation Act (NHPA).
- WAP funding is subject to WAP cost limitations ($3,623)* on renewable energy measures.
- Approval does not constitute approval of State’s H&S Plan or materials listed for purpose of allowable expenditures.

Used with permission from Joseph Pereira, CUB Regulatory Director
Analytics and Modeling - Pre-Process

Step 1 - Audit + Solar Assessment
  • Determines qualification

Step 2 - Utility Bill Analysis
  • Usage determines sizing

Step 3 - System Sizing
  • PVWatts

Step 4 - PV Worksheet
  • Compliance and QA

Used with permission from Joseph Pereira, CUB Regulatory Director
CO Model: Xcel Energy Rooftop PV Partnership

- Xcel involvement catalyzed by Global Settlement in December 2016
- $2.00/W up front incentive
- $0.034/kWh performance incentive
- These incentives total to nearly $2.70/watt
What Does the Addition of Rooftop PV Look Like?

- 10-20% of Units Receive Rooftop PV
- Average Size: 3.5 kW
- Typical Unit Annual Benefit:
  - Wx EE Only: $200
  - Wx EE + PV: $600

Used with permission from Joseph Pereira, CUB Regulatory Director
Results thus far . . .

- **7,727 kWh** is the average annual electricity usage among the first **50** rooftop solar PV homes.
- **$0.12** is the average cost per kWh for electricity for a total of **$927.18** per year.
- **$525.82** is the estimated average annual cost savings in electricity, which represents an average **57%** reduction in costs for electricity (4,381 kWh/annually).
- **104** systems interconnected to date, **119** additional units in process
- Average system size of **2.96 kW**
- Average system cost of **$8,929 ($3.01/ W)**
- Average customer savings can exceed **$850 annually**
New [MN] Incentives [Solar*Rewards LI Program]

<table>
<thead>
<tr>
<th>Category</th>
<th>2019 Production Incentive per kWh</th>
<th>2019 Up-front Incentive $/W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-Income Residential</td>
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<tr>
<td>Low-Income</td>
<td></td>
<td></td>
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<td>$0.06</td>
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</tr>
<tr>
<td>Low-Income Solar Garden</td>
<td>$0.06</td>
<td>$0.50</td>
</tr>
</tbody>
</table>
Available Funding

• Start date: January 28, 2019

• Solar*Rewards incentive budget
  – 2019: $10 million + 2018 rollover – admin costs
  – 2020: $10 million, no rollover
  – 2021: $5 million

• Low-income Solar*Rewards incentives carve-out
  – Minimum of 10% of annual budget reserved for low-income until Sept. 1, then unreserved funds released for general Solar*Rewards use
  – Maximum 20% for low income

Source – Xcel Energy for more information SolarProgramMN@xcelenergy.com
Single Family

• Qualification: Resident must meet the Low Income Home Energy Assistance program (LIHEAP) guidelines of 50% of state median income (either renter or homeowner), or the Weatherization Assistance Program (WAP) of 200% federal poverty level.

• Verification: Proof of eligibility for the program as determined through a LIHEAP application.
Multi-Family Qualifications

• For 2-4 unit properties:
  – Qualification: 50% or more of the units are eligible for either LIHEAP or WAP
  – Verification: Proof of eligibility for the program as determined by a LIHEAP application or property listed on the WAP list

• For 5+ unit properties
  – Qualification: 66% or more of the units are eligible for either LIHEAP or WAP, or use restriction is declared against the property
  – Multiple verifications on the following slide
Multi-Family (5+ Unit Verifications)

- Proof of participation in the LIHEAP program (i.e. approved application)

- Check against a Weatherization Assistance Program (WAP) list which should list the property to demonstrate that this building qualifies for LI spending. Public properties are included on this list.

- Reference Low Income Rental Classification (LIRC) assessor report with the listed property

- Use Restriction that is declared again the property listing the income restrictions on the property to demonstrate that the building qualifies for LI spending.
Non-profits & Government facilities

• Qualification – 66% or more of constituents served must be meeting the LIHEAP criteria, or other pre-approved metric.

• Verification – Submit 501(c)(3) form, mission statement and proof of LI constituents using historical data
  – Ex. For schools, they need to provide and verify the percentage of students that receive free/reduced lunch. 66% of more of the student body needs to be on free/reduced lunch to qualify.
The Financial Picture
Typical PV System

NREL: U.S. Solar Photovoltaic System Cost Benchmark
Solar Calculations

**Capacity** - How big is it?

1. \( \frac{\text{(# of panels)}}{\text{300 watts each}} \times \frac{\text{(watts)}}{\text{or}} \frac{\text{(kW)}}{\text{}} \)

**Generation** - How much energy will this system generate per year?

3. \( \frac{\text{(watts)}}{\text{}} \times \frac{\text{(LPC)}}{\text{}} = \frac{\text{(kWh/yr)}}{\text{}} \)

**Cost** - What's total installed cost?

2. \( \frac{\text{(watts)}}{\text{}} \times \frac{\text{($) watt}}{\text{}} = \$ \)

*Energy Trust offers incentives to help bring these costs down!

**Bill Savings** - How much money can be saved per year?

4. \( \frac{\text{(kWh/yr)}}{\text{}} \times \frac{\text{($) kWh}}{\text{}} = \$ \text{ (per year!)} \)
Solar Calculations

- 9 Panels
- Installed price of $2.75
- LPC = 1.283
- Utility price of $0.115/kWh

\[ \text{Wh} \]
Solar Calculations

- 9 X 300 watts = 2700 watts (2.7 kW)
- 2700 watts X $2.75 = $7425
- 2700 watts X 1.283 LPC = 3464 kWh/yr
- 3464 X $0.115 kWh = $398.37 savings per year

2.7 kW)

54 kWh/yr

7 savings per year
NREL’s PVWatts® Calculator

Estimates the energy production and cost of energy of grid-connected photovoltaic (PV) energy systems throughout the world. It allows homeowners, small building owners, installers and manufacturers to easily develop estimates of the performance of potential PV installations.

https://pvwatts.nrel.gov/
SOLAR RESOURCE DATA

The latitude and longitude of the solar resource data site is shown below, along with the distance between your location and the center of the site grid cell. Use this data unless you have a reason to change it.

Solar resource data site

Lat, Lon: 44.97, -93.1 1.4 mi
# SYSTEM INFO

Modify the inputs below to run the simulation.

<table>
<thead>
<tr>
<th>DC System Size (kW):</th>
<th>2.7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module Type:</td>
<td>Standard</td>
</tr>
<tr>
<td>Array Type:</td>
<td>Fixed (open rack)</td>
</tr>
<tr>
<td>System Losses (%):</td>
<td>15.79</td>
</tr>
<tr>
<td>Tilt (deg):</td>
<td>28</td>
</tr>
<tr>
<td>Azimuth (deg):</td>
<td>225</td>
</tr>
</tbody>
</table>

---

**Draw Your System**

NOTICE: as mentioned on the previous page, we are working on a solution to the new google map licensing policy and costs.
### PV Watts

System output may range from 3,289 to 3,545 kWh per year near this location. Click [HERE](#) for more information.

<table>
<thead>
<tr>
<th>Month</th>
<th>Solar Radiation (kWh/m²/day)</th>
<th>AC Energy (kWh)</th>
<th>Value ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>2.73</td>
<td>197</td>
<td>23</td>
</tr>
<tr>
<td>February</td>
<td>3.74</td>
<td>245</td>
<td>28</td>
</tr>
<tr>
<td>March</td>
<td>4.75</td>
<td>329</td>
<td>38</td>
</tr>
<tr>
<td>April</td>
<td>5.19</td>
<td>329</td>
<td>38</td>
</tr>
<tr>
<td>May</td>
<td>5.91</td>
<td>371</td>
<td>43</td>
</tr>
<tr>
<td>June</td>
<td>6.16</td>
<td>369</td>
<td>42</td>
</tr>
<tr>
<td>July</td>
<td>6.72</td>
<td>404</td>
<td>46</td>
</tr>
<tr>
<td>August</td>
<td>5.99</td>
<td>360</td>
<td>41</td>
</tr>
<tr>
<td>September</td>
<td>4.92</td>
<td>297</td>
<td>34</td>
</tr>
<tr>
<td>October</td>
<td>3.68</td>
<td>231</td>
<td>26</td>
</tr>
<tr>
<td>November</td>
<td>2.77</td>
<td>185</td>
<td>21</td>
</tr>
<tr>
<td>December</td>
<td>2.10</td>
<td>149</td>
<td>17</td>
</tr>
<tr>
<td><strong>Annual</strong></td>
<td><strong>4.55</strong></td>
<td><strong>3,466</strong></td>
<td><strong>$397</strong></td>
</tr>
</tbody>
</table>
System Size 3000 W’s (3kW)
Installed cost per watt X $3.50
Gross Installed Costs = $10,500
30% ITC (26% 2020, 22% 2021)
- $3150
Net Installed Cost = $7,350
System Size: 3000 W’s (3kW)
Installed cost per watt: X $3.50
Gross Installed Costs: = $10,500
Total S*R Upfront: - $6,000
30% ITC (26% 2020, 22% 2021): - $1,350
Net Installed Cost: = $3,150
S*R Annual production payment: - $285.43 x 10 years
Total out of pocket: = $295.70
System Size 3000 W’s (3kW)
Installed cost per watt X $3.25
Gross Installed Costs = $9,750
Total S*R Upfront - $6000
30% ITC (26% 2020, 22% 2021) - $1,125
Net Installed Cost = $2,625
S*R Annual production payment - $285.43 x 10 years
Total out of pocket = ($229.3)
## New Incentives

<table>
<thead>
<tr>
<th></th>
<th>2019 Production Incentive per kWh</th>
<th>2019 Up-front Incentive $/W</th>
</tr>
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</tr>
</tbody>
</table>
Cumulative Cash Flow For Period

Cumulative Cash Flow For Period
Questions?

Let’s Talk Solar
BREAK

• 12:00-1:00 PM
IN CASE YOU MISSED IT
Health & Safety
- Lead
- Asbestos
- CO – oven, furnace, DWH
Energy Conservation
• Mobile home insulation
• Air Sealing
• Insulation levels bag count
• QCI review to reduce callbacks
Questions?

In case you missed it
Thank You!