Portland Community Solar Farm Open House

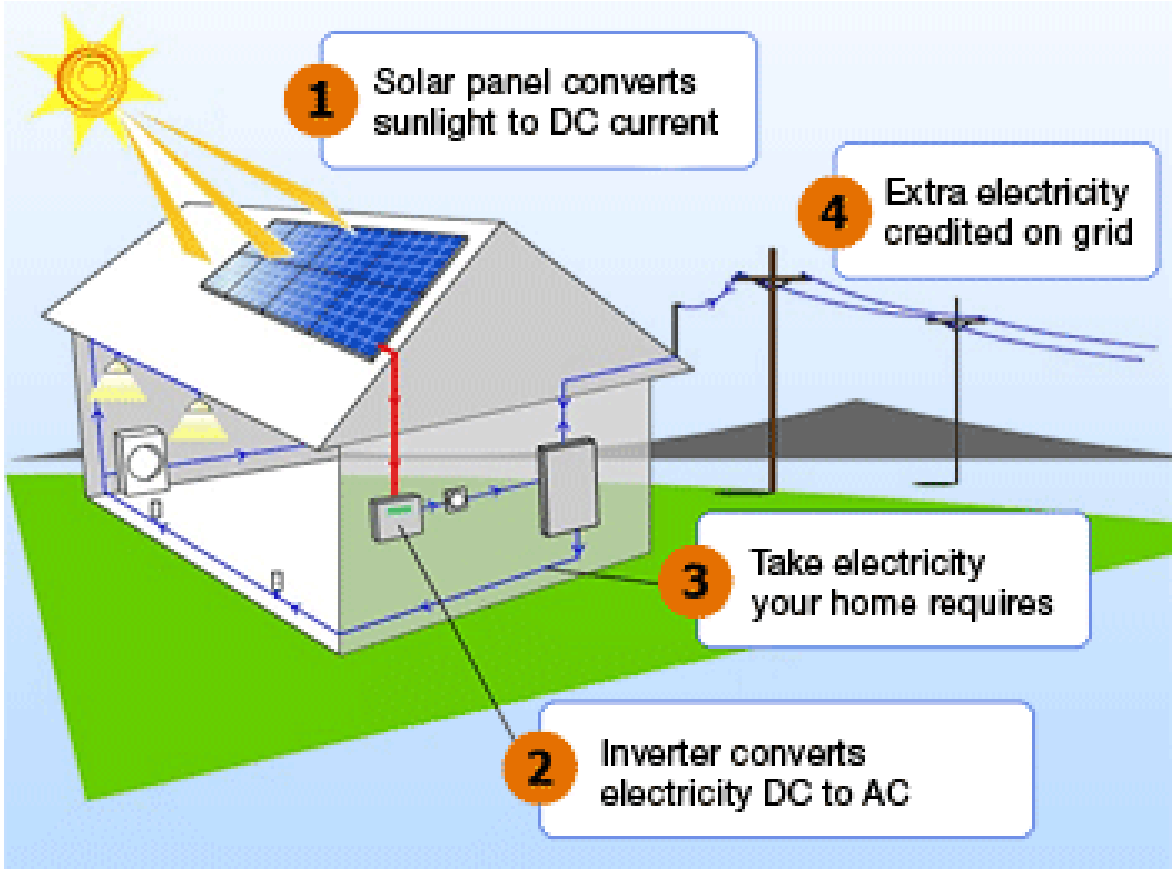
July 22, 2014
St. Luke's Church
Portland, Maine

Topics

- What is “community solar”?
- Structuring
- Financing
- Specific projects

Goal: Provide an **overview** of
Portland Community Solar Farms
Details in follow-up meeting for investors

How does Rooftop PV work?



Extra electricity produced is banked by CMP and offsets use over the next 12 months

Maine's "net metering" law allows PV owners buy or sell from the grid at full retail rates.

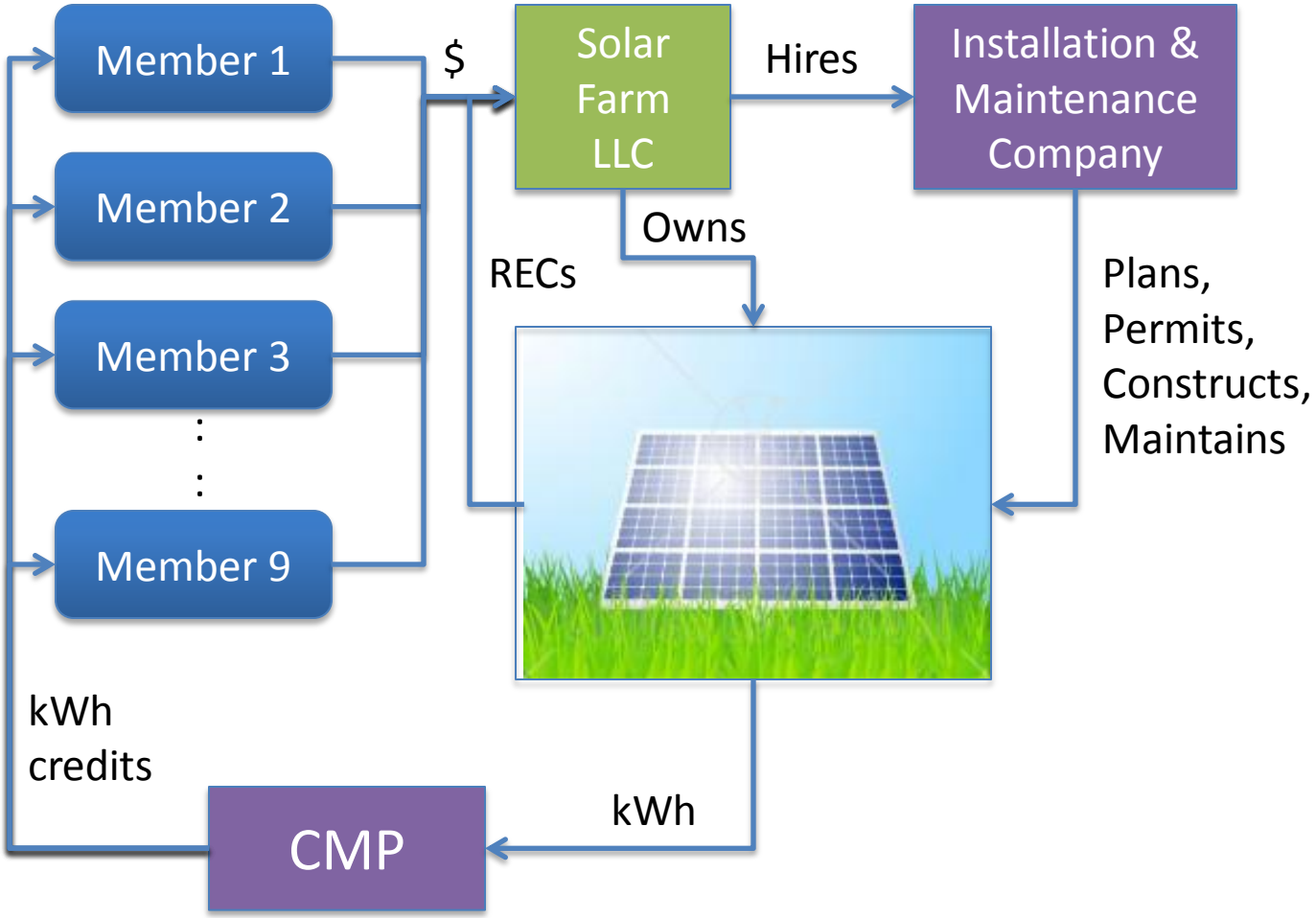
Rooftop PV isn't for everyone

- Some don't control their rooftop
  - Renters
  - Condo owners
- Some rooftops are poor locations
  - Overshadowed
  - Poor orientation / angles
  - Structural and maintenance issues
  - Historic districts
- Links ownership of real estate and panels

Benefits of Community Solar

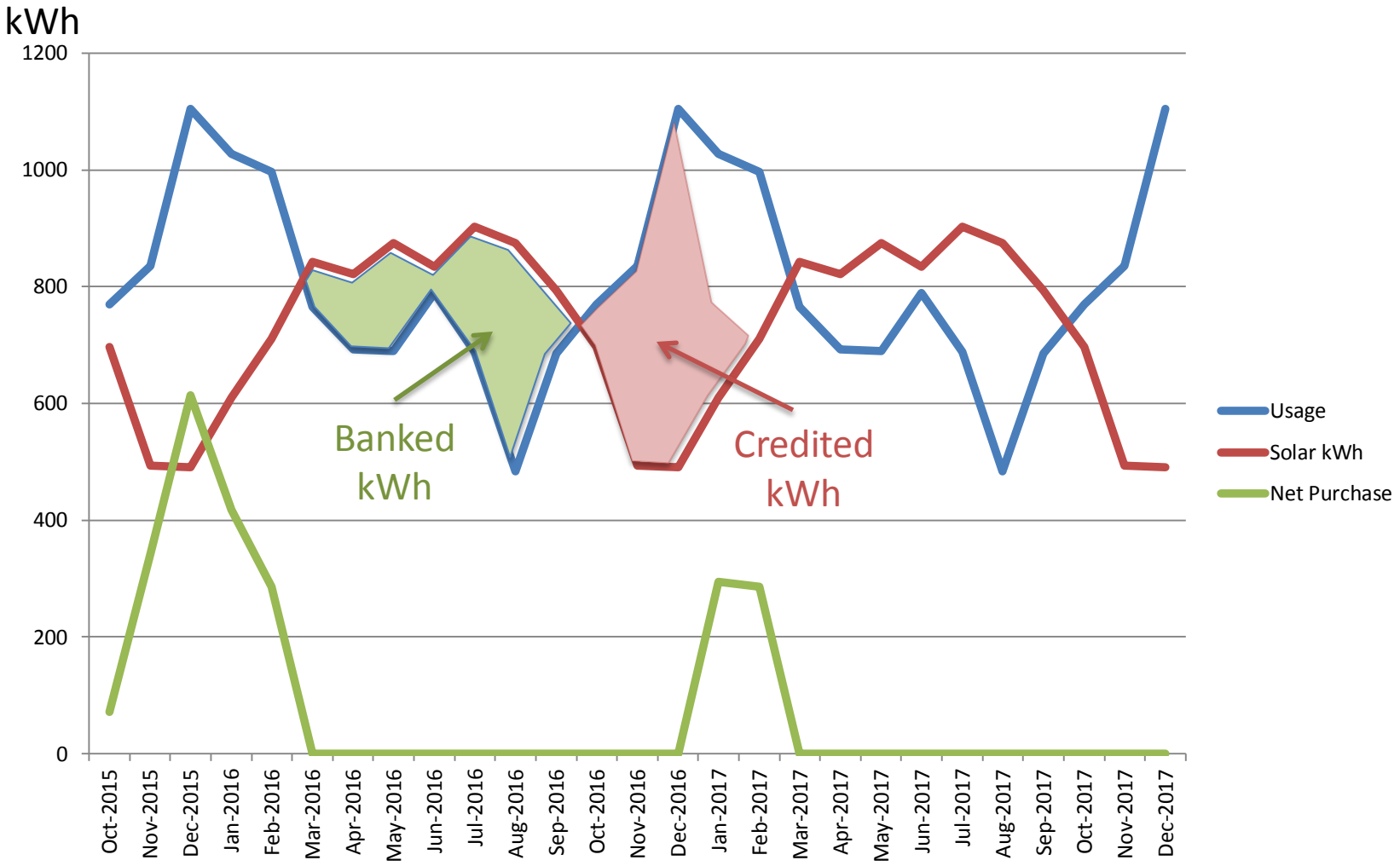
- Same net metering benefit as Rooftop PV
- Located with good orientation and no shading
- Economies of scale
- Income from sale of Renewable Energy Credits
- Member's shares are:
  - Portable within CMP service area
  - Transferable

How does Community Solar work?



Net Metering Reduces Power Bills

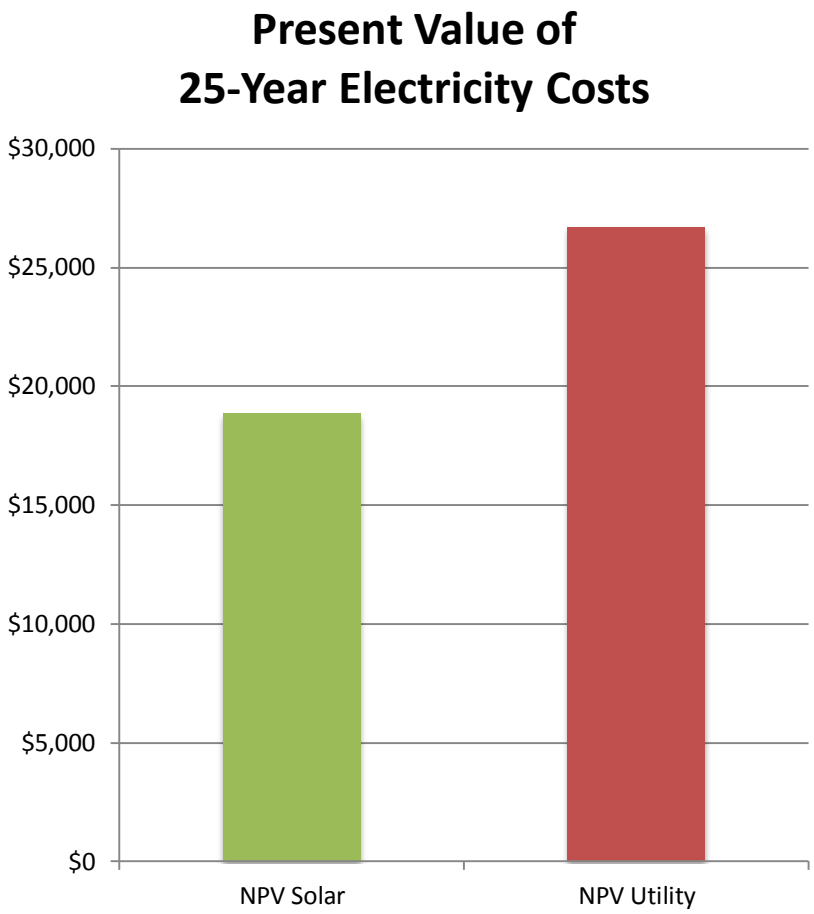
Example of Household Usage and 8 kW Solar Generation



Note: Generated power does not offset CMP's fixed monthly service charge.

Pre-paying your power bill

- Indicative figures for 6 kW share:
  - About 7,340 kWh/year
  - $18,346
    - After 30% federal tax credit
    - Reflects 14% cash discount
  - 13-year payback, 8.5% IRR
  - Financing available at 2.99% APR for 12 years
    - $175/month
    - 16.5 year payback
- Over 25 years, the same power from CMP is likely to cost **$54,150**
- Note: does not include value of RECs or admin costs



Assumes utility rates rise 3% faster than general inflation, 5% nominal discount rate.

Environmental and Social Benefits

- Displaces need for fossil-fueled generation
  - Reduces air pollution

Pollutant	6 kW Share	52 kW Array
CO2 (tons)	3.8	33
SO2 (lbs)	9.3	81
NOx (lbs)	5.5	48

  - Reduces system peak loads, our dirtiest power
- Reduces need to build new gas-fired generation and gas pipelines
- Reduces fuel price uncertainty

Proposed Projects

- Graef farm, Wayne
  - Target 52 kW project, 9 investors
  - Near-final technical proposal
- Old City Landfill, Ocean Ave., Portland
  - In discussion with City staff
  - Initial target of 100 kW, 18 investors
  - Room for substantially more capacity in the future
  - Preliminary site plan and pricing

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A Vision

Canton, MA: 15 acres of panels on 40-acre landfill; 5,750 kW

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Graef Farm

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Graef Farm