

Clean Energy Finance: Program Options for Local Governments

John MacLean, Energy Efficiency Finance Corp.

Olympia, WA

360-339-3936

jmaclean@eefinance.net

Our Definition of Clean Energy (CE):

- **Energy Efficiency (EE) in all sectors: residential, commercial, industrial, public and institutional, *plus***
- **Small Scale Customer-sited Renewable Energy (RE) systems, Distributed Generation & Cogeneration**
- **Not: Large, Grid-connected Renewables or Bio-fuels**

Examples of EE & RE Measures

Residential

- Insulation
- Blower Doors
- Windows
- Air Sealing
- Lighting
- Appliances
- Furnaces
- Water Heaters
- Solar hot water
- Solar PV electricity

Commercial

- Heating, ventilating, air conditioning (HVAC)
- Efficient motors
- Lighting
- Controls
- Solar hot water & water efficiency

Industrial

- Boilers
- Cogeneration
- Bio-mass
- Motors
- Industrial process
- Waste heat recovery
- Controls

Institutional/ Public Sector

- Same as commercial buildings
- Bio-mass district heating
- Water & waste water plants
- Landfill gas
- Vehicle fleets
- Public lighting

Why Clean Energy Investment?

- Target EE/RE measures that *pay for themselves via energy cost savings*
 - Makes strong business case to energy users to implement projects
 - Finance addresses key up-front cost barrier
- Opportunities & Context:
 - Local economic development; sustainable economy
 - Job growth in the trades -- Green Jobs
 - Reduce emissions; achieve climate goals;
 - Energy security in face of volatile energy prices
 - New era: opportunity to come together, address critical problems constructively, build social capital
- Local governments are concerned with EE/RE investment in:
 - Local government buildings & facilities
 - Residential, commercial, industrial, institutional : our citizens!
 - Trend: local governments taking the lead to facilitate CE finance

Presentation Outline

- **Key elements of successful CE finance programs**
- **Program Models for Local Governments**
 - **Commercial bank financing**
 - **Local bond issues**
- **What other cities are doing:**
 - **Cambridge, Berkeley, Bellingham, Spokane**
 - **Washington's LOCAL & ESPC programs for local government projects**
- **State roles & potential new Federal funding**
- **Discussion: stakeholder consultation; CTED Report**

Key elements of CE Finance Programs

- Successful programs combine
 - (1) Access to finance, with
 - (2) Marketing & project development services
- Choose target markets: e.g., residential, commercial, etc.
- Focus on economic projects
- Coordinate multiple funding sources; use utility funding
- Create public/private partnerships
 - Mobilize commercial financing (credit enhancement)
 - Coordinate local contractors & equipment providers
- Plan Job Training
- Marketing: key local government role
- Program services & administration : *in-house or outsource?*
- Legal analysis

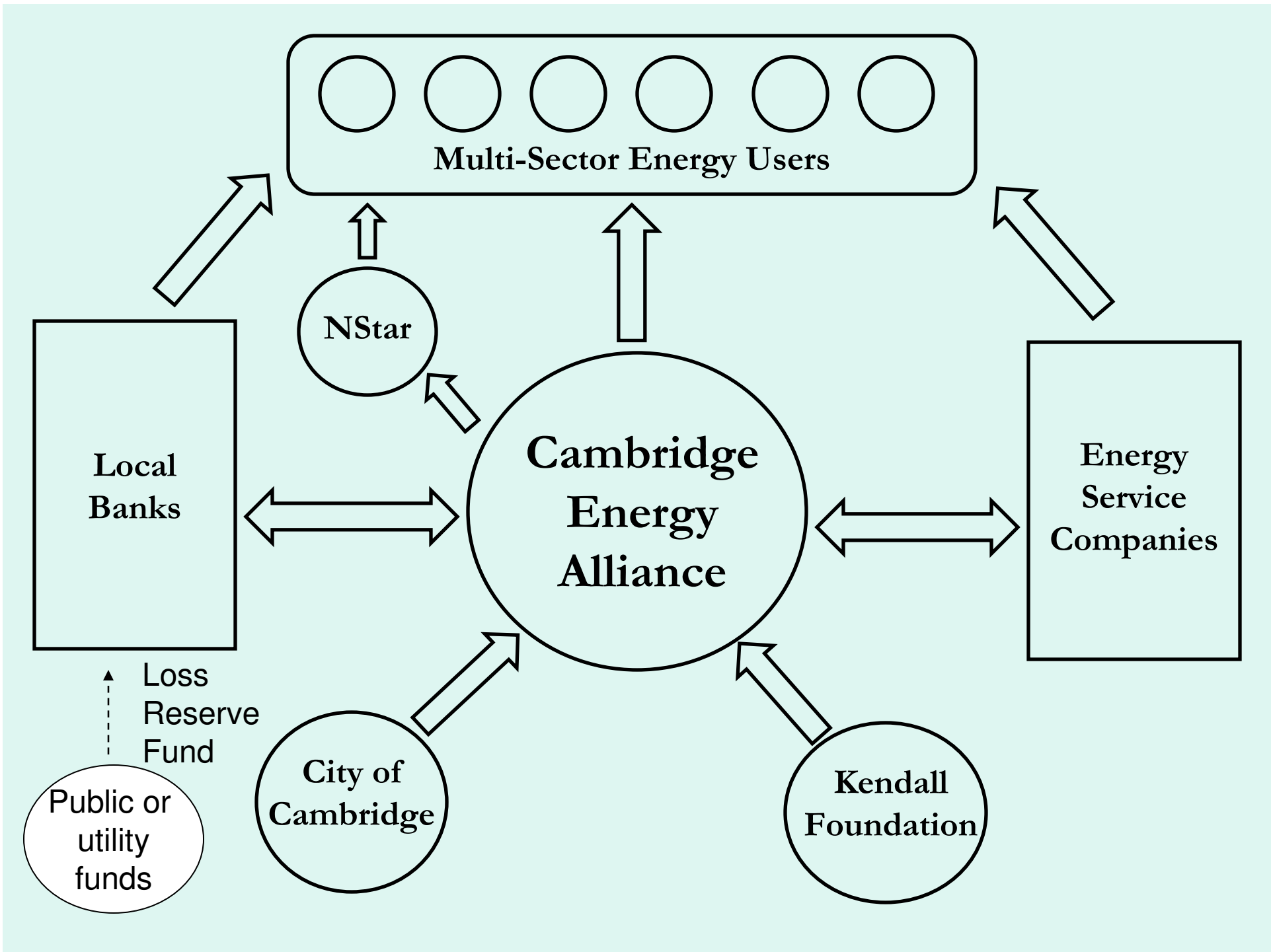
MODEL 1:
Commercial Bank Finance

Finance Program Options for Local Governments in Washington State

MODEL 1

Organize Financing with Commercial Banks

- Develop loan product & finance facility with Local Bank(s)
- Recruit bank partners with steady flow of clean energy assets for financing: economic, well-prepared, creditworthy
- Use and meet bank underwriting criteria
- Credit Enhancement: funding via Federal monies, or utility monies to increase access to finance
- Clean Energy Certificate of Deposit: community capital



Key Features of Cambridge Model

Multiple sectors addressed: residential, commercial, industrial, institutional, governmental

Comprehensive: power, natural gas, heating oil and water; focus on buildings & facilities

Targets, over five years:

- 50% market participation
- 50 MW peak load reduction
- 10% total energy/emissions savings : 150,000 tons/year
- \$100 million investment

CEA Services:

- City has lead marketing role
- CEA provides expertise, project management, guidance through full project cycle,
- Qualifies ESCOs; conducts pooled procurements
- Organizes financing via local banks
- Coordinate with Utility; load management
- Seeking to capture carbon offset values (VERs)

MODEL 2:
Local Bond Issues

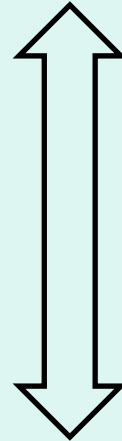
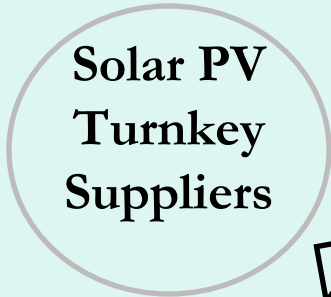
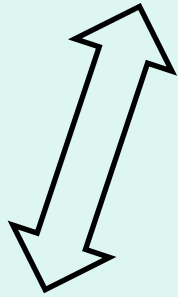
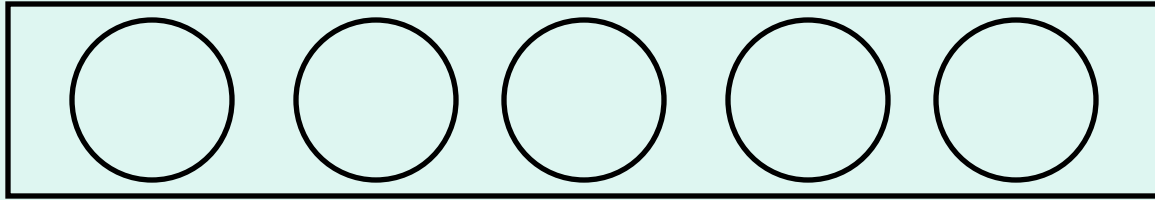
Finance Program Options for Local Governments in Washington State

MODEL 2

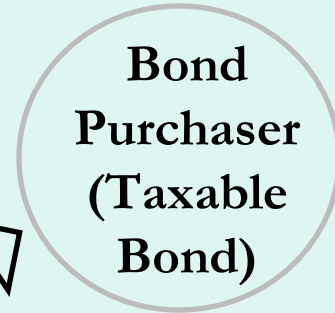
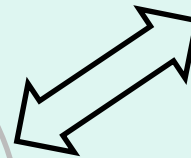
Local Bond Issues

- Local Government forms a Local Improvement District (LID), special assessment district, Climate Benefit District, or new “energy conservation utility”
- Meet Constitution Article VIII sec 10, Gifting clause tests
- Enabling Legislation required, and being considered
- Loan collections via “utility” bill, prop. tax or partner bank
- Superior Lien on property enabled with loan
- Aggregates many small loans
- Review impact on local government credit/bond capacity
- Hybrid models may be possible, partnering with commercial financial institutions, e.g., assign the lien on property

Property Owners: Households & Businesses



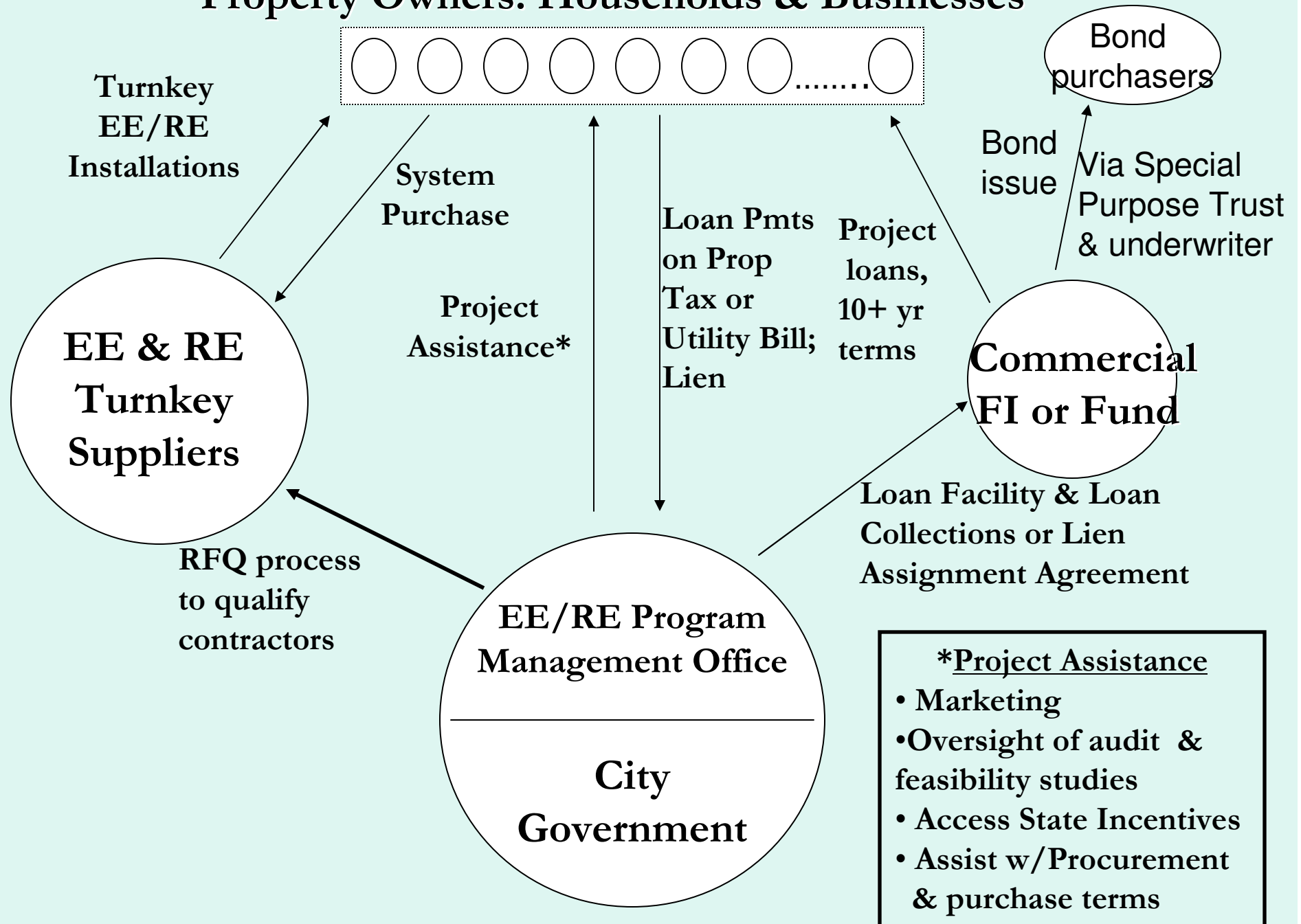
**EE/RE loans;
Collections on
prop. tax bill**



Key Features of Berkeley Model

- City forms a Sustainable Energy Finance District; participating property owners “opt in” to the SEFD
- City issues bonds; City provides loans to property owners for solar PV and EE
- Loans are repaid via the property tax bill; loan terms = 20 yrs at 6%
- City bears the credit risk of loan, but can use lien & property tax enforcements
- City qualifies system installers, operates program & helps property owners with design/purchasing & to access State incentives
- *This program still in pilot stage.* Model being developed in other States, e.g., Colorado

Property Owners: Households & Businesses



Bellingham

- Sustainable Connections, local non-profit, cooperating with City
- Green power challenge program, achieved high participation (12%)
- EE Challenge program being developed targeting residential, commercial and non-profit sectors
- Goal: create “one-stop shop” for businesses and residential property owners to develop and finance projects
 - PSE program to obtain a resource conservation manager
 - Building Performance Center & Opportunity Council implementing residential & home weatherization programs
- Developing finance programs with local banks: will consider use of Federal EECBGs for loss reserve funds
- Bond finance mechanism being investigated; inputs to Legislature on current legislation

Spokane

Sustainable Works, local non-profit

- project development services, targeting non-profit sector
- EE project management with local contractors
- Financing through Spokane Teacher's Credit Union
- coordination with Avista for utility incentives
- developing job training program
- City roles for scale-up being developed

Sustainable Local Investment Partnership:

- group of local banks seeking to develop new EE financing products

Development & Finance for Local Government Projects

General Administration: Energy Service Performance Contracting

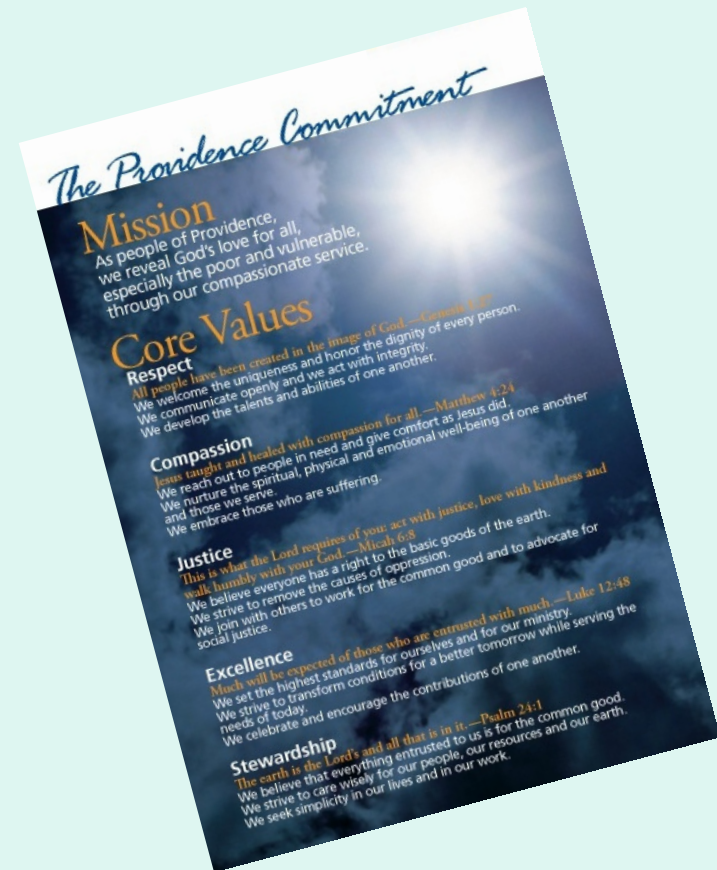
- ESPC provides: Audits, Project Development, Procurement of ESCO contractor, Energy Savings Verification. Earns project development fee.
- Provides services to State agencies & local governments
- Very successful program model, scaleable

State Treasurer: LOCAL lease purchase finance program

- Pooled Tax-exempt Lease Purchase Financing
- Eligible Borrowers: Local Governments and political sub-divisions
- EE/RE are eligible projects
- terms up to 10 years at tax-exempt rates

Providence Value of Stewardship

"We view natural resources as an occasion to praise God's Providence, and we promote the responsible use of goods that belong to all of humanity."



-Sisters of Providence
Constitution and Rules

Energy Management at St. Peter Hospital

Scope of energy investment:

- Energy efficient lighting
- Heating system efficiency improvements (heat recovery)
- Cooling system efficiency improvements
- Aligning systems operation with hospital function
- Improved maintenance of systems
- Energy efficient new construction
- Water efficiency in equipment purchase and retrofit

Hospitals are the second largest consumer of energy by building type.

Energy Management at St. Peter Hospital

Utility Consumption Between 1998 – 2007:

Electricity Use down 7%

Natural Gas Use down 34%

Water Use down 55%

Sewer Discharge down 64%

Annual 2007 energy savings + cost avoidance = \$702,029 (32%)

Puget Sound Energy conservation grant funding = \$675,000

Simple payback on \$2,456,400 energy investment = 4.56 years (22% IRR)

Energy Star certified facility in 2003, 2006 & 2007

Census at St. Peter Hospital has grown ~ 2% per year during this period

Examples of Local Firms

- **McKinstry (Evergreen EE project)**
- **Sunset Air**
- **Taurus Electric**
- **South Sound Solar**
- **Jobs in the Trades**
- **Community Action Council of Lewis, Mason and Thurston Counties**
 - Administers CTED Home Weatherization Program

EEFC CTED Report on State Clean Energy Finance Program Options

- All Sectors, Comprehensive Programs
- Use of State chartered bonding authorities
- Seminar feedback will inform & shape report to CTED & Legislature
- Report is Due February 2 – In time for any necessary legislative action

Energy User Sector	Finance Mechanism
Public Sector: State & Local Governments	Pooled Lease Purchase through GA-ESPC
Industrial	Pooled Bond Issue through WEDFA
Non-Profit, Higher Education, & Health Care	Pooled Bond Issue through WHEFA & WHCFA
Residential/Sm. Commercial	Commercial Banks, LIDs/CBDs
Multi-Family Housing	Pooled Bond Issues through WSHFC
Large Commercial	Private Capital, Business Improvement Districts
Agriculture	Pooled Bond Issue through WEDFA

State Roles

- Assist Local Governments to Develop Program Designs
- Network and Share Best Practices
- Enabling Legislation
- Secure Funding for Expansion of Existing Programs (LOCAL), Program Start-up and Credit Enhancement
- Support and Secure Funding for Workforce Training Programs

Federal Stimulus Money

Energy Efficiency and Conservation Block Grants

- Estimated Share for WA: \$50 million
- Broad, Eligible Uses
 - Sectors: EE in Transportation, Buildings, “Other Appropriate Sectors”
 - Program design & implementation, audits, revolving funds, etc.

Qualified Energy Conservation Tax-Credit Bonds

- Estimated Share for WA: \$17.5 million
- Eligible Entities

Home Weatherization Funds

- WA allocation from \$5 million to \$68 million (over 1 year)

Breakout Session Topics

- **Your goals and interests for increasing investment in clean energy in your community**
- **Identify advantages and disadvantages of each program model**
 - **Implementation issues**
 - **What roles are appropriate for your community to take on?**
- **Identify roles for the State which support your communities to implement a program**
- **Consider ways to utilize Federal Energy Efficiency & Conservation Block Grants (figure \$5.00 to \$7.50 per capita)**