



AN UPDATE ON ENERGY INCENTIVES

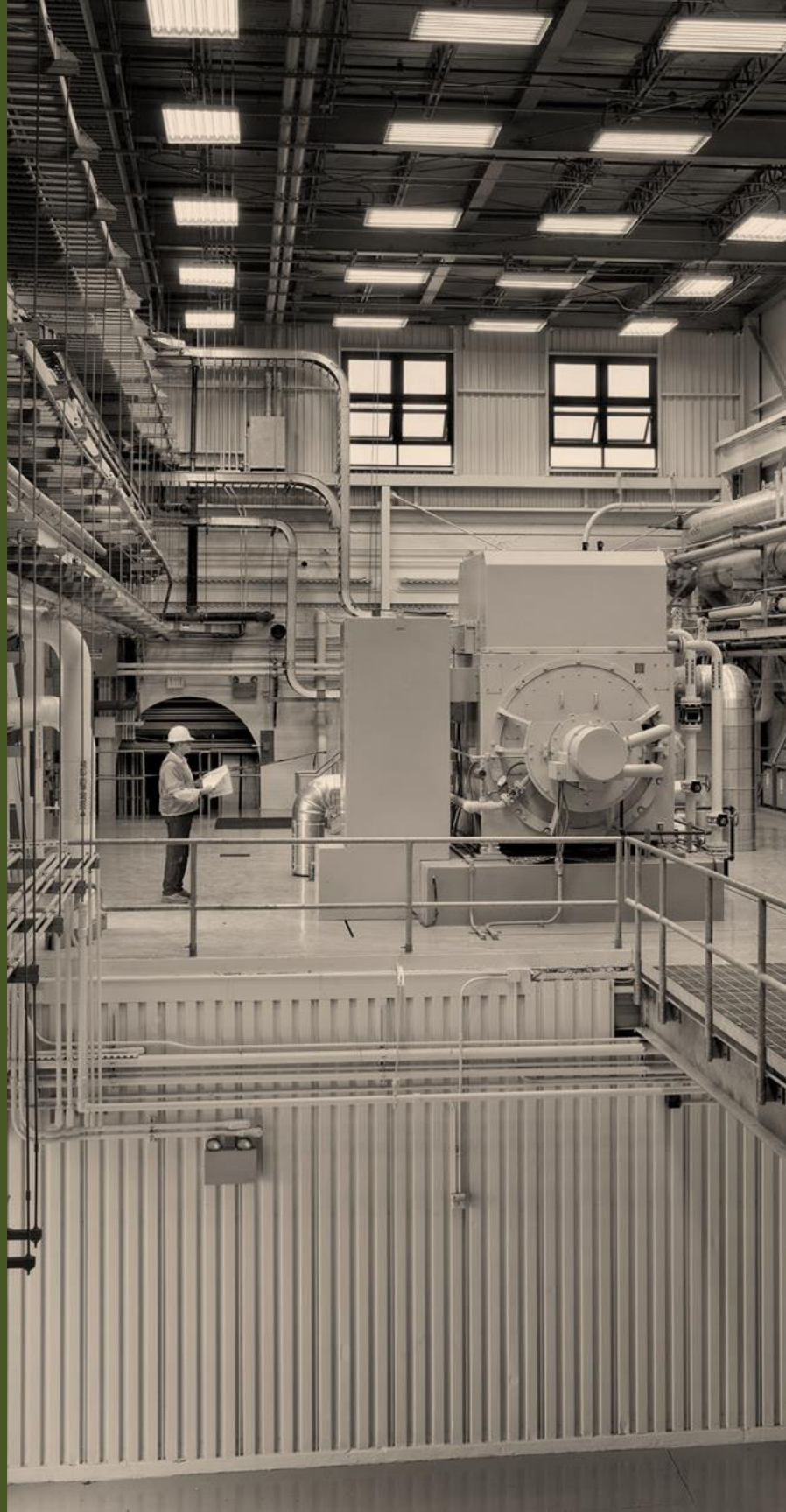
Rod Schwass, MBA, MA, LEED AP
Program Manager, Energy & Power Solutions

JACOBS®

Agenda

1 Relevant incentives for district energy technologies and projects

2 Application tips, lessons learned and resources



RELEVANT INCENTIVES

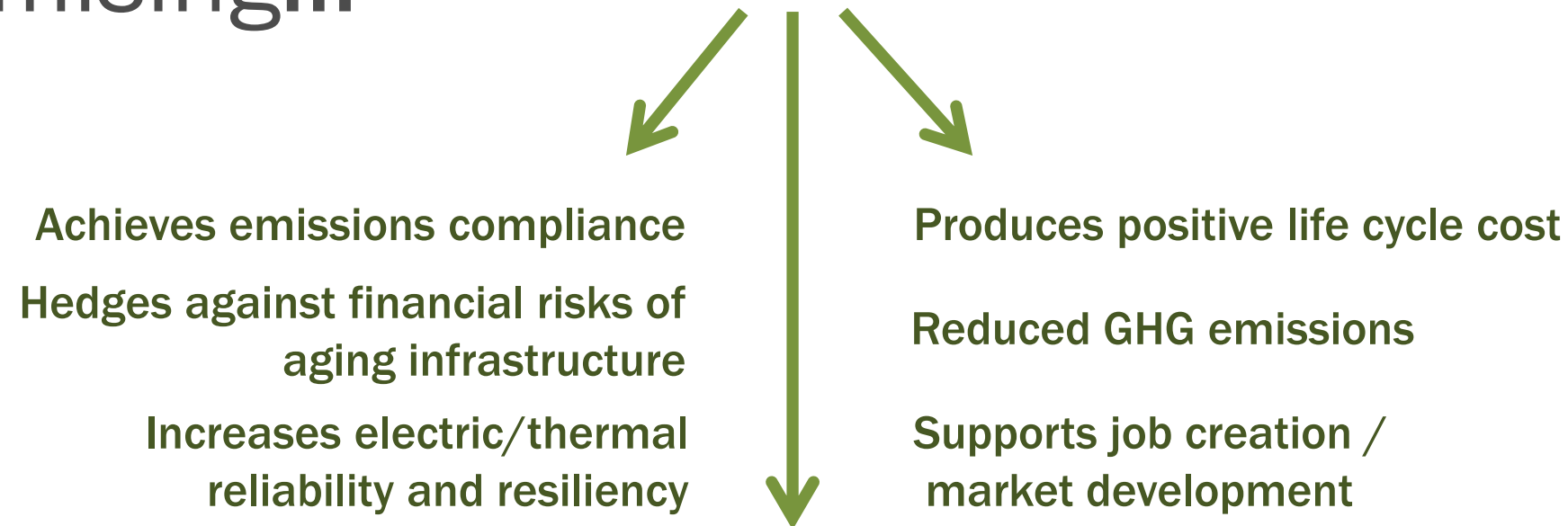
for district energy technology
and projects

The Challenge

Campuses and District Energy Systems need to meet the overlapping challenges of accelerating campus/system growth, while maintaining reliability of current systems and incorporating more resiliency to address contingencies, all while simultaneously reducing their energy costs and GHG footprint.

The Challenge

Even if a distributed energy or district energy project looks promising...



...how do you justify large **capital investment** for utilities in a **highly-competitive budget environment**?

Federal Incentives

Federal funding sources:

DOE

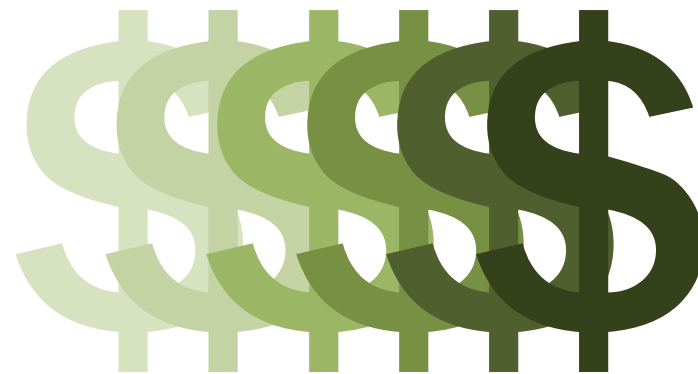
EPA

USDA

DHS

DOD

National Laboratories



All have programs
to support a wide
variety of energy
technologies and
projects

Federal Incentives

Grants, cost-share agreements and cooperative agreements offer:

up to
100%
for analysis, modeling
and testing

up to
80%
for research and design

up to
50%
for demonstration and
commercial deployment

level of government oversight | loan guarantees | technical assistance

Federal Incentives: DOE Outlook

FY16 budget (enacted) for clean energy programs

\$2.4 billion

FY17 budget request for clean energy programs

\$3.2 billion

Federal Incentives: DOE Programs

Applied R&D programs supporting energy efficiency and renewable energy technologies:

Biomass	eere.energy.gov/biomass/
Buildings	eere.energy.gov/buildings/
Federal Energy Management	eere.energy.gov/femp/
Geothermal	eere.energy.gov/geothermal/
Fuel Cells	eere.energy.gov/hydrogenandfuelcells/
Advanced Manufacturing	eere.energy.gov/manufacturing/
Solar	eere.energy.gov/solar/
Vehicles	eere.energy.gov/vehiclesandfuels/
Weatherization	eere.energy.gov/wip/
Wind	eere.energy.gov/wind/
Water Power	eere.energy.gov/water/

Federal Incentives: Opportunities

BENEFIT (annual)

2016: \$20M in grants for building energy efficiency projects

2017: \$20M, applications due March 8, 2017

ARPA-E Open FOA (3 year cycle)

2015: FOA offered \$125M in grants

2018: \$/Timing TBD

Grid Modernization Initiative (GMI)

2016: \$220M in grants for integration of renewables and energy storage, cybersecurity, controls

FEMP AFFECT

2014-2016: \$11M in grants awarded (CHP, Renewable Energy, Energy Efficiency Retrofits)

2017: \$3M in grants offered (applications were due Jan 30, 2017)

Federal Incentives: Opportunities

SUNSHOT Technology to Market

2015: FOA offering \$45M in grants

2016: \$21M in grants – accelerate deployment / soft costs

2017: \$30M in grants for grid integration of solar power (ENERGISE)(Awards made Jan 31, 2017)

NETL Resilient Electricity Delivery Infrastructure (REDI)

2014/2015: \$3.5M in grants for local governments

Loan Guarantee Program

Updated Oct 2015: Additional \$1B. Clarified eligibility of CHP. Rolling application periods. Challenging for smaller projects (<\$50M) due to application fees and credit subsidies

Tax Credits

10% ITC for CHP-Expired / 30% ITC for renewables-Phasing Out by 2022, with exception of PV

Federal Incentives: Opportunities

Other DOE Sources	ARPA-E, National Labs, Clean Energy RACs, Industrial Assessment Centers, Federal Utility Partnership Working Group
USDA	BRDI / AFRI
FAA	GSE / Terminal Ops Efficiency
DOD	ESTCP, DARPA, Onsite and Utility Scale Renewables, Biofuels, EUL/UESC/ESPC
EPA	Recognition / Tech Support, brownfields, EPA-CHP Partnership
DHS / FEMA	Cybersecurity, Hazard/Flood Mitigation
Commerce	Economic Development



State and Local Incentives

State Energy Programs

NYSERDA: Ongoing program to fund CHP and other energy efficiency projects

MA DOER: \$40M in grants for energy resiliency projects

MD Energy Admin: Up to \$500k grants for CHP projects

IL DCEO: Up to \$2M grants for CHP projects

CA PUC: Ongoing SGIP grants. Recent mods – leaning toward favoring energy storage and biogas projects.

Utility Incentives

Alternative portfolio standards and customer demand on the rise

Stability and cost avoidance

Prescriptive and custom **project incentives**

Utility-Community-Military collaboration

“Green Bank” Initiatives

CA, CT, HI, MA, NY

Varied capitalization - Bonding, loans, grants, credit support

Varied technology focus

Accelerate the pace of private investment

Clean Power Plan?? / Carbon Tax??

CPP likely DOA – Does include a mechanism for **Auction / Allocation** of allowances and **Potential for Reinvestment** in CHP, DG, EE projects

Carbon Tax – Does not appear to be gaining traction...yet.



APPLICATIONS

tips, lessons learned and resources

Application Tips

The key elements of successful applications:



Take the long view



Team



Technology



Timing

Application Tips

**Pursue precursor technical
and financial assistance at a
smaller scale**

**Develop appropriate
partnerships**

Develop 2-3 page white papers

Hold meetings with career staff

Application Tips

Pursue precursor technical and financial assistance at a smaller scale

- Analytic grants
- Technical support
- Competitive solicitations
- Unsolicited proposals

Develop appropriate partnerships

- End users
- Technology partners
- Design partners
- Construction partners

Application Tips

Develop 2-3 page white papers

- Create visibility
- Legislative support
- Industry support

Hold meetings with career staff

- Align priorities
- Risk reduction
- Legislative support
- Industry support

Lessons Learned

1 Accounting System Compliance

- DCAA
- Pre-Award Audits

- ## 2 Legal Review
- Certs and Reps
 - FARS
 - Davis-Bacon

- ## 3 M&V Plan
- Additional Instrumentation

- ## 4 Project Timing
- Award Process
 - Cost Eligibility

- ## 5 Project Recognition
- Ribbon cutting
 - VIP tours
 - Project profile
 - Peer reviews
 - Industry publications

Resources

Database of State Incentives for Renewables and Efficiency
[DSIRE.org](https://www.dsire.org)

Energy.Gov
energy.gov/public-services/funding-financing

EERE Energy Efficiency Exchange
eere-exchange.energy.gov

EPA-CHP Policies and Incentives Database
epa.gov/chp/policies/database

DOE Technical Assistance Partnerships
energy.gov/eere/amo/chp-technical-assistance-partnerships

State Energy Office websites

Utility websites

JACOBS[®]

Rod Schwass

Booth #27

roderick.schwass@jacobs.com

816.817.1500

