

AN UPDATE ON ENERGY INCENTIVES

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Agenda

1

Relevant incentives for district energy technologies and projects

2

Application tips, lessons learned and resources



RELEVANT INCENTIVES

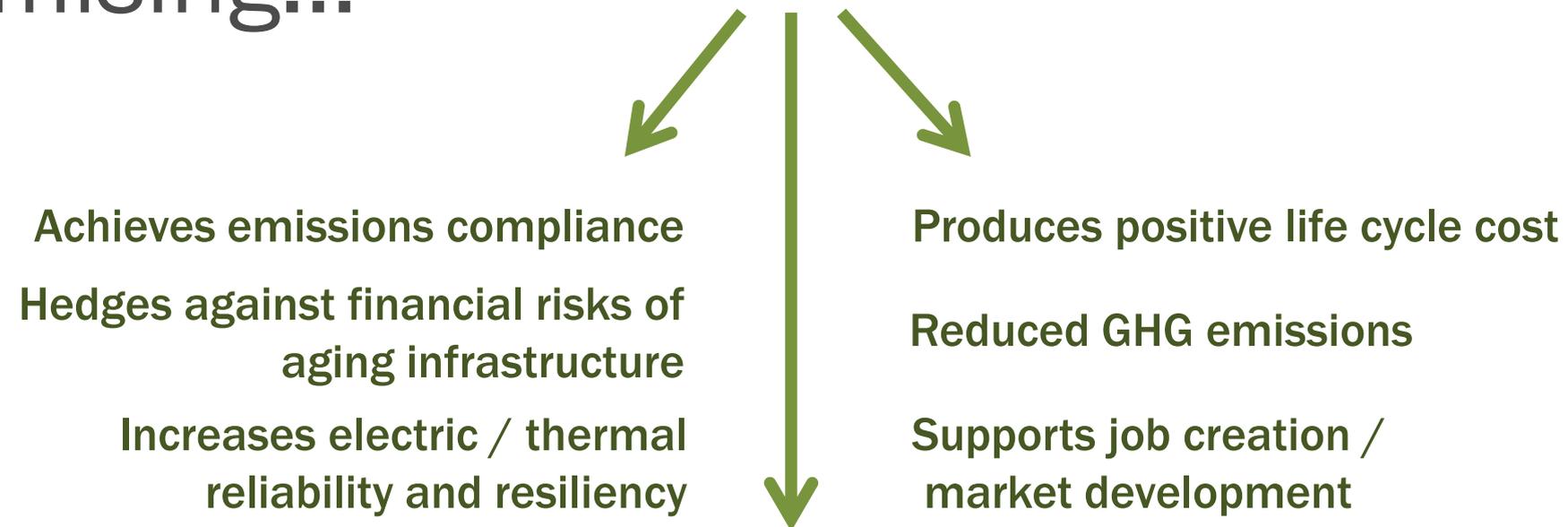
for district energy technology
and projects

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

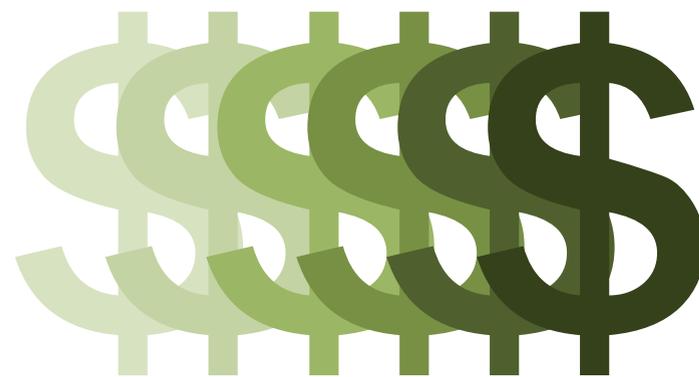
EPA

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

FY17 budget (enacted/CR) for clean energy programs

\$2+ billion

FY18/19 budget requests for clean energy programs

\$700+ million

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

2018: No current solicitation

ARPA-E Open FOA (three-year cycle)

2015: FOA offered \$125M in grants

2018: FOA offered \$100M in grants (Dec 2017 announcement / Concept Papers due 2/16)

2019: FY19 Budget Request does not include funding

Grid Modernization Initiative (GMI)

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

No current grant offering

FEMP AFFECT

2014-2016: \$11M in grants awarded (CHP, renewable energy, energy efficiency retrofits)

2017: \$3M in grants offered

2018/2019 – AFFECT funding not included in budget request

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)

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.

Funding discontinued with 2019 Budget Request

Tax Credits

10% ITC for CHP-Extended to 2021 under new tax legislation / 30% ITC for renewables-Phasing Out by 2022, with exception of PV

Federal Incentives: Opportunities

AMO CHP for Grid Support

FOA Issued / Amendment 1 Issued February 2018

Focus - Grid connected CHP at “manufacturing” facilities

Concept papers due March 23, 2018

Full applications due May 10, 2018

Available funding - \$10M (\$1M to \$1.5M max per project)

Anticipated award timeframe – August/September 2018

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?? / Federal Infrastructure Renewal??

CPP remains under review - likely DOA, repeal process u/w
Does include a mechanism for **Auction / Allocation** of allowances and **Potential for Reinvestment** in CHP, DG, EE projects

Carbon Tax – Was not gaining traction in recent years, but with the CPP stalled, several states considering carbon pricing schemes to spur a reduction in GHG emissions.



APPLICATIONS

tips, lessons learned and resources

Application Tips

The key elements of successful applications:



Take the long view



Team



Technology



Timing

Application Tips – Become a Partner

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

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