



# AN UPDATE ON ENERGY INCENTIVES

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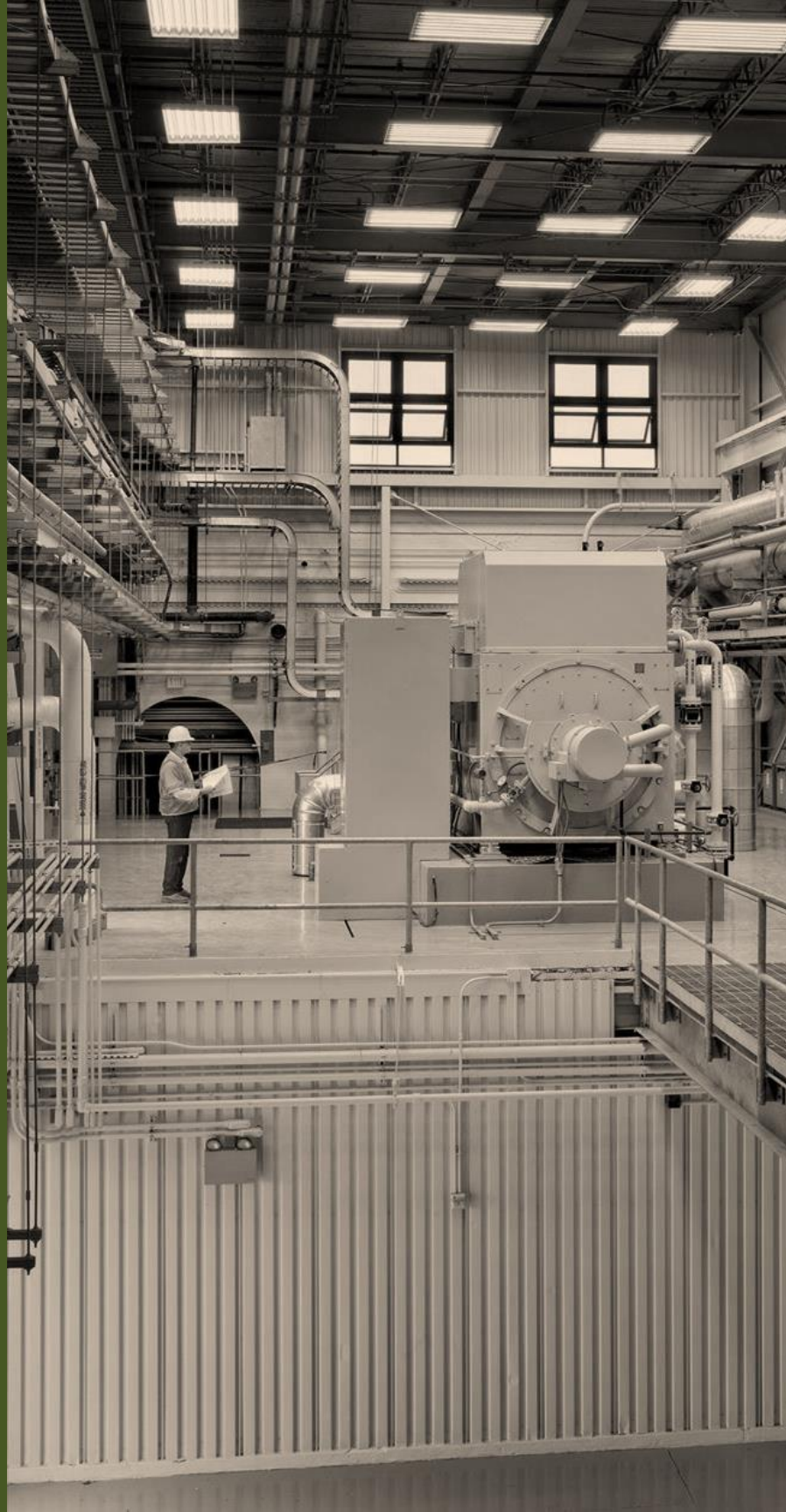
# Agenda

1

**Relevant incentives** for district energy technologies and projects

2

**Application tips**, lessons learned and resources



# RELEVANT INCENTIVES

for district energy technology  
and projects

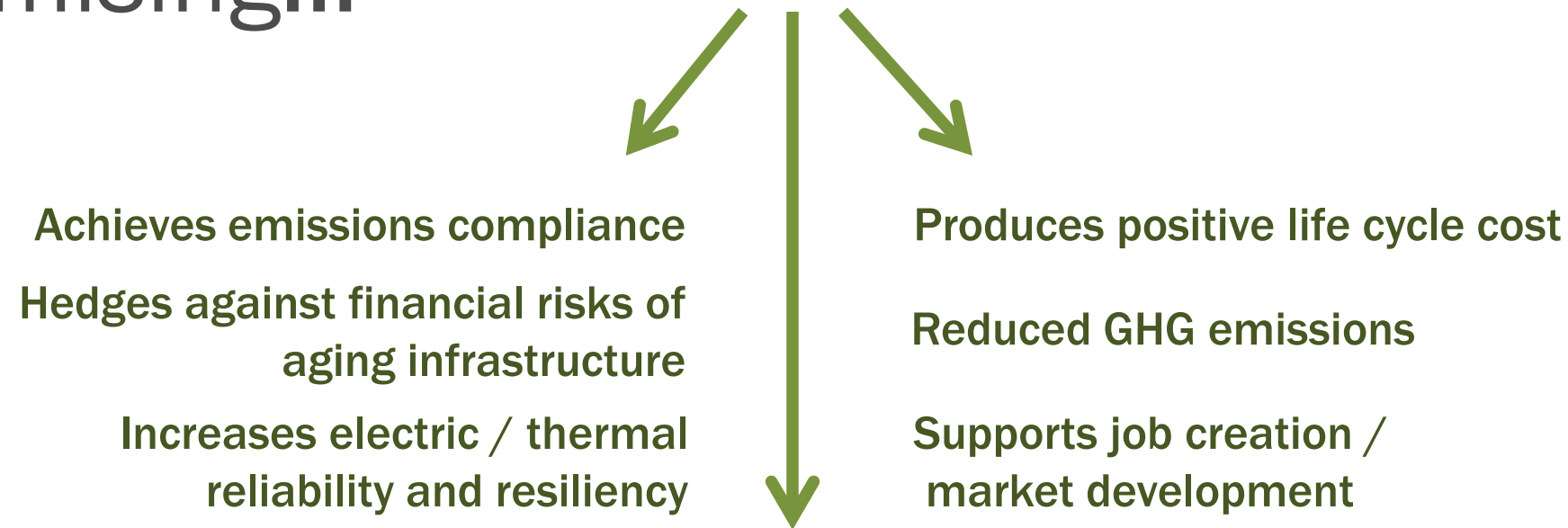
# The Challenge

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

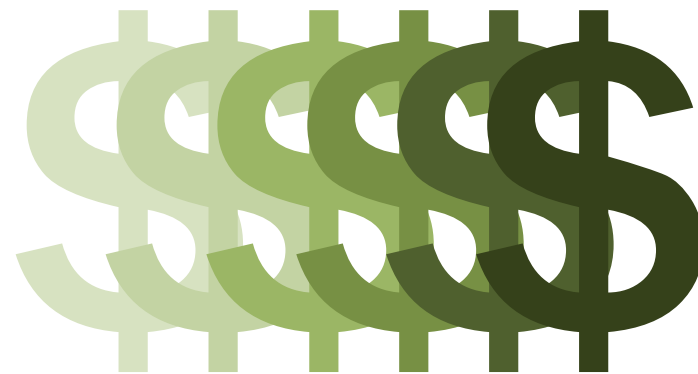
EPA

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

FY16 budget (enacted) for clean energy programs

**\$2.4 billion**

FY17 budget request for clean energy programs

**\$3.2 billion**

FY18 budget request for clean energy programs

**\$776 million**



# Federal Incentives: DOE Programs

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

<b>Biomass</b>	<a href="https://eere.energy.gov/biomass/">eere.energy.gov/biomass/</a>
<b>Buildings</b>	<a href="https://eere.energy.gov/buildings/">eere.energy.gov/buildings/</a>
<b>Federal Energy Management</b>	<a href="https://eere.energy.gov/femp/">eere.energy.gov/femp/</a>
<b>Geothermal</b>	<a href="https://eere.energy.gov/geothermal/">eere.energy.gov/geothermal/</a>
<b>Fuel Cells</b>	<a href="https://eere.energy.gov/hydrogenandfuelcells/">eere.energy.gov/hydrogenandfuelcells/</a>
<b>Advanced Manufacturing</b>	<a href="https://eere.energy.gov/manufacturing/">eere.energy.gov/manufacturing/</a>
<b>Solar</b>	<a href="https://eere.energy.gov/solar/">eere.energy.gov/solar/</a>
<b>Vehicles</b>	<a href="https://eere.energy.gov/vehiclesandfuels/">eere.energy.gov/vehiclesandfuels/</a>
<b>Weatherization</b>	<a href="https://eere.energy.gov/wip/">eere.energy.gov/wip/</a>
<b>Wind</b>	<a href="https://eere.energy.gov/wind/">eere.energy.gov/wind/</a>
<b>Water Power</b>	<a href="https://eere.energy.gov/water/">eere.energy.gov/water/</a>

# 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 (awards TBD June 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 (Energy Jobs and Security Act of 2017 – bill proposed in Senate seeks reinstatement of CHP ITC)

# 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 remains under review - likely DOA** – 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

**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](https://energy.gov/public-services/funding-financing)

EERE Energy Efficiency Exchange  
[eere-exchange.energy.gov](https://eere-exchange.energy.gov)

EPA-CHP Policies and Incentives Database  
[epa.gov/chp/policies/database](https://epa.gov/chp/policies/database)

DOE Technical Assistance Partnerships  
[energy.gov/eere/amo/chp-technical-assistance-partnerships](https://energy.gov/eere/amo/chp-technical-assistance-partnerships)

State Energy Office websites

Utility websites



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