

# How to Use Government Funds to Offset Costs for Critical Capital Infrastructure

February 2023





#### **Supporting the Mission + the Bottom Line**



#### Agenda

- Healthcare State of Business

   Current physical environment
- Regional Energy Outlook
   What is changing?
- Revised Tax Incentives

   Inflation Reduction Act 2022
- Alternate Funding Mechanisms
  - $\circ$   $\;$  How could this fit within your organization?





## **The Changing World of Healthcare**

#### There are many business driver goals to achieve...



Improve patient outcomes & patient experience

- Patient room use flexibility
- Reimbursements
- Compliance requirements
- S

 $(\bigcirc)$ 

- Reduce operational expenses
- Compete with other institutions
  - Stakeholder Support





# Creating Internal Alignment

- Healthcare organizations continue to position investments in patient focused technology.
- How long can aging infrastructure remain in place to support these new investments?
- Nearly every healthcare facility has critical infrastructure need, that if addressed, will produce improved energy performance.





## **Additional Challenges of Physical Environment**





VBP statistics published January 2021 Healthcare Management Review

# Healthcare is responsible for over 9% of U.S. GHG emissions.



|   |        |                  |                       |   |   |   | 200   |
|---|--------|------------------|-----------------------|---|---|---|---|
|   |        |                  |                       |   |   |   | 56  |
|   |        |                  |                       |   |   |   | Sour  |
|   |        |                  |                       |   |   |   |   |
|   |        |                  |                       |   |   |   |   |
|   |        |                  |                       |   |   |   |   |
|   |        |                  |                       |   |   |   |   |
|   |        |                  |                       |   |   |   |   |
|   |        |                  |                       |   |   |   |   |
| 1 |        |                  |                       |   |   |   |   |
| 1 |        |                  |                       |   |   |   |   |
| 1 |        |                  |                       |   |   |   |   |
| 1 |        |                  |                       |   |   |   |   |
| 0 | 10,000 | 20,000<br>Energy | 30,000<br>/ Use per F | 40,000<br>Building (1   | 50,000  | 60,000  | 70,000  |
|   |        |                  |                       | Image: Contract of the second seco | Image: Contract of the second seco | 0       10,000       20,000       30,000       40,000       50,000         0       10,000       20,000       30,000       40,000       50,000 | 0         10,000         20,000         30,000         40,000         50,000         60,000           0         10,000         20,000         30,000         40,000         50,000         60,000 |

Figure 1-2 Energy use per building for common commercial building types



#### If health care worldwide was its own country, it would be one of the top five largest carbon emitters on the planet.

Today, the Biden-Harris Administration announced that 61 of the largest U.S. hospital and health sector companies responded to the Administration's Health Sector Climate Pledge ↗, committing to reduce greenhouse gas emissions 50% by 2030. The new commitments represent over 650 hospitals and thousands of other providers across the country, and include plans to strengthen resilience to climate change, protect public health, and lower costs. The health care sector accounts for 8.5% of U.S. emissions, so these bold commitments advance President Biden's goal to reduce nationwide greenhouse gas emissions 50-52% in 2030 and reach net-zero emissions in 2050.

#### THE WHITE HOUSE



FACT SHEET: Health Sector Leaders Join Biden Administration's Pledge to Reduce Greenhouse Gas Emissions 50% by 2030

JUNE 30, 2022

BRIEFING ROOM > STATEMENTS AND RELEASES

Health Sector Steps Up to Protect Public Health and Lower Costs

Two of the five largest US private hospital and health systems (Ascension and CommonSpirit Health) and the largest US public health system have pledged to halve their carbon emissions by 2030. Associations, Nonprofits and Technical Assistance Organizations

 National Academy of Medicine, Association of American Medical Colleges, the Joint Commission, Health Care Without Harm, American College of Physicians (NJ), Kimball Sustainable Healthcare, Mazzetti



The Joint Commission is working collaboratively with other experts to foster innovative solutions to this challenge. We've convened a Decarbonization Technical Advisory Panel (TAP) focused on:



Reviewing existing standards and survey methods to identify ways we contribute to waste and CO2 emissions.



Identifying potential new standards for health care providers to reduce waste and CO2 emissions.



#### 10. Does your organization have an executive leader responsible for environmental sustainability, including climate change mitigation?

7. Which of the following best describes your organization's decarbonization efforts?

a. We have set a decarbonization percentage reduction goal

- 1. % reduction goal
- 2. Target year to meet goal
- Baseline year

b. D We have set a "net-zero emissions" goal

1. Target year to meet goal

2. Baseline year

c. U We have set both a decarbonization percentage reduction and a "net-zero emissions goal"

% Reduction Goal

- 1. % reduction goal
- 2. Target year to meet goal

Baseline year

"Net-Zero Emissions" Goal

- Target year to meet goal
- 5. Baseline year

. U We have not set any decarbonization targets/goals but plan to within the year

We have not set any decarbonization targets/goals and uncertain if any plans to within the year



# American Hospital Association



## Who's Leading the Way



TRANE



#### Bold Statement 30% energy consumption reduction by 2030



#### Environmental Stewardship | Mayo Clinic

## **Cleveland Clinic**

#### Bold Statement(s) Patients, Caregivers, Community,

Environment, Governance Environmental Health Reporting Climate Resilience Waste Reduction Healthy Buildings Energy Conservation Through our energy reduction Through innovative design We promote resiliency by We minimize the waste initiatives, we have improved the reducing our greenhouse ga generate through reducing standards and principles, w efficiency of our facilities by mor ins, advocating for clima ecycling and composting, an sure our facilities promot than 20% over the last decade alth of both building occup art healthcare and increasing nanage our waste streams esponsibly to keep our air, wat and the environme een space on our properties a and environment clear Sustainable Procurement Innovative Collaboration Water Stewardship Cleveland Clinic is driving Our caregivers collaborate wit Clean water is essential fo innovation and demand fi one another and entities fro uman life and wellbeing. Ou products that support ou local to international levels commitments to human he dvance sustainable practic clude conse environmental health and th te healthcare industry, our ter quality and managing delivery of affordable, hig perations and surrounding tormwater and wastewate

#### Sustainability | Cleveland Clinic

LEARN MORE

quality care.



## Healthcare Average Energy Usage



Heating, ventilation, water heating, and cooling are major energy consumers in healthcare systems, accounting for almost **65% of total energy usage**.

Strict air quality requirements for hospitals to maintain safety and comfort contribute to the large energy consumption of heating and cooling activities.





"Hospital energy resiliency requires us to look to the future of the energy grid and not to simply reinforce the methods of the past."

(Hospital executive)

# Regional Utility Landscape

# Electricity prices surged 14.3% in<br/>2022, double overall inflation: USreportPower prices jumped 51% in PJM

Published Jan. 19, 2023



Figure 1: Summer Reliability Risk Area Summary

|          | Seasonal Risk Assessment Summary   |  |  |  |  |  |  |
|----------|--|--|--|--|--|--|--|
| High     | Potential for insufficient operating reserves in normal peak conditions  |  |  |  |  |  |  |
| Elevated | Potential for insufficient operating reserves in above-normal conditions |  |  |  |  |  |  |
| Low      | Sufficient operating reserves expected                                   |  |  |  |  |  |  |

#### INDIANA NEWS

#### IURC approves Duke Energy's 7.2% rate hike

by: <u>Matt Adams</u> Posted: Sep 30, 2022 / 02:37 PM EDT Updated: Oct 3, 2022 / 12:45 PM EDT

NERC sounds alarm on solar tripping in 'sobering' summer reliability report

Published May 19, 2022

 $\sim$ 

## Hospital Energy Usage + Spend Report Cards



**EUI = Energy Usage Index** 

(kBTU/sq ft)

**ECI = Energy Cost Index** 

(\$/sq ft)





# **Inflation Reduction Act**

The IRA aims to boost U.S. prosperity by accelerating domestic manufacturing, improving infrastructure resiliency, and advancing equity. Bettering American buildings is a critical element of the IRA, in which energy efficiency, renewable energy, indoor air quality, and community decarbonization are priorities.

## **IRA Incentives & Investments Impacts on the Commercial Market**



In **estimated** corporate **Tax Credits** designed to catalyze private investment in **clean energy**, transport, and manufacturing

#### \*Source: McKinsey & Company

# \$30.5B+

To boost U.S. production to support building electrification (incl. energy storage & heat pumps)

# \$30B

To transition states & electric utilities to clean electricity



To decarbonize federal buildings through construction or retrofit

# \$1B+

In grants for **local gov'ts** to modernize commercial & residential buildings to meet energy codes \$50M+

To reduce air pollutants in schools



## **Updates to Energy Investment Tax Credit (48 ITC)**

| Updated Energy Invest                          | tment Tax Credit             | Investment Tax Credit eligible for the following                    |
|--|------------------------------|---|
| Base Rate                                      | 6%                           | technologies:   |
| Increased Credit<br>Amount*                    | Up to 30%                    | <ul> <li>Solar</li> <li>Geothermal</li> <li>Cogeneration</li> </ul> |
| Meets Domestic<br>Content<br>Requirements**    | 2%-10%                       | <ul><li>Thermal storage</li><li>Energy storage</li></ul>            |
| Meets Energy<br>Communities<br>Requirements*** | 2%-10%                       |   |
| Total Potential<br>Credit Value                | Up to 6% Base<br>+ Up to 50% |   |

Bonus

\*Increase Credit Amount: must meet prevailing wage and apprenticeship requirements \*\*Domestic Content: i.e., materials are made in the USA

\*\*\*<u>Energy Communities</u>: a brownfield site (as defined by the EPA); a community with above-average unemployment rate and 1) \$0.17 direct employment or 2) 25%+ local tax revenue from coal, oil or nat gas processes; census tracts containing mines and/or coal-fired generating units that have retired after 12/31/1999 or 12/31/2009 respectively Source: full text of the legislation (<u>Link</u>)

## **Show Me the Money!**

# **Direct Pay**

New pathway to access the clean energy tax incentives that previously would have only been available to tax-paying entities. Instead of receiving a tax credit, non-profits will be able to apply for and receive a refund equal to the amount of the credit.

#### Benefits:

 Payout at time of tax "filing" in the following year of project being started.

Information as of 2/15/2023 and subject to change as more parameters are provided by government.

 Begin renewable strategy prior to federal or governing agent mandates





#### **Solar Array Cash Purchase, No Incentives**



|                      | Year 1    | Year 2    | Year 3    | Year 4    | Year 5    | Year 6    | Year 7    | Year 8    | Year 9    | Year 10   | Year 11   | Year 12   | Year 13  | Year 14 | Year 15 |
|----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|---------|---------|
| Energy Savings       | 32,000    | 35,200    | 38,720    | 42,592    | 46,851    | 51,536    | 56,690    | 62,359    | 68,595    | 75,454    | 83,000    | 91,300    | 100,430  | 110,473 | 121,520 |
| Utility Rebate       | 1,500     |           |           |           |           |           |           |           |           |           |           |           |          |         |         |
| 0                    |           |           |           |           |           |           |           |           |           |           |           |           |          |         |         |
| Total Annual Savings | 33,500    | 35,200    | 38,720    | 42,592    | 46,851    | 51,536    | 56,690    | 62,359    | 68,595    | 75,454    | 83,000    | 91,300    | 100,430  | 110,473 | 121,520 |
|                      |           |           |           |           |           |           |           |           |           |           |           |           |          |         |         |
| Solar Array          | 850,000   |           |           |           |           |           |           |           |           |           |           |           |          |         |         |
| Total First Costs    | 950.000   |           |           |           |           |           |           |           |           |           |           |           |          |         |         |
| Total First Costs    | 850,000   |           |           |           |           |           |           |           |           |           |           |           |          |         |         |
|                      |           |           |           |           |           |           |           |           |           |           |           |           |          |         |         |
| Annual Net Cash Flow | (816,500) | 35,200    | 38,720    | 42,592    | 46,851    | 51,536    | 56,690    | 62,359    | 68,595    | 75,454    | 83,000    | 91,300    | 100,430  | 110,473 | 121,520 |
| Cumulative Cash Flow | (816,500) | (781,300) | (742,580) | (699,988) | (653,137) | (601,600) | (544,911) | (482,552) | (413,957) | (338,502) | (255,503) | (164,203) | (63,773) | 46,699  | 168,219 |

#### **13.5 Year Simple Payback**



#### Solar Array Cash Purchase, Incentives

|                      | Year    | 1 Year 2      | Year 3    | Year 4    | Year 5   | Year 6  | Year 7 | Year 8  | Year 9  | Year 10 | Year 11 | Year 12 | Year 13 | Year 14 | Year 15 |
|----------------------|---------|---------------|-----------|-----------|----------|---------|--------|---------|---------|---------|---------|---------|---------|---------|---------|
| Energy Savings       | 32,000  | 35,200        | 38,720    | 42,592    | 46,851   | 51,536  | 56,690 | 62,359  | 68,595  | 75,454  | 83,000  | 91,300  | 100,430 | 110,473 | 121,520 |
| IRA ITC              | 595,00  | 0             |           |           |          |         |        |         |         |         |         |         |         |         |         |
| Utility Rebate       | 1,500   |               |           |           |          |         |        |         |         |         |         |         |         |         |         |
| C                    |         |               |           |           |          |         |        |         |         |         |         |         |         |         |         |
| Total Annual Savings | 628,50  | 0 35,200      | 38,720    | 42,592    | 46,851   | 51,536  | 56,690 | 62,359  | 68,595  | 75,454  | 83,000  | 91,300  | 100,430 | 110,473 | 121,520 |
|                      |         |               |           |           |          |         |        |         |         |         |         |         |         |         |         |
| Solar Array          | 850,00  | 0             |           |           |          |         |        |         |         |         |         |         |         |         |         |
| Total First Costs    | 850,00  | 0             |           |           |          |         |        |         |         |         |         |         |         |         |         |
|                      |         |               |           |           |          |         |        |         |         |         |         |         |         |         |         |
| Annual Net Cash Flow | (221,50 | 00) 35,200    | 38,720    | 42,592    | 46,851   | 51,536  | 56,690 | 62,359  | 68,595  | 75,454  | 83,000  | 91,300  | 100,430 | 110,473 | 121,520 |
| Cumulative Cash Flow | (221,50 | 00) (186,300) | (147,580) | (104,988) | (58,137) | (6,600) | 50,089 | 112,448 | 181,043 | 256,498 | 339,497 | 430,797 | 531,227 | 641,699 | 763,219 |

#### Maximum 70% Incentive: \$595,000 6 Year Simple Payback

Incentive % Based on Amount of Bonus Credits Achieved

#### Minimum 30% Incentive: \$255,000 11 Year Payback

## Why is direct pay important to Healthcare renewable investment?

Incentivizes renewable technology ownership, instead of utilizing Power Purchase Agreements where Renewable Energy Credits (RECs) purchased.

Thought Provoking: Onsite Renewable Now or Purchasing RECs in the future

#### Purchased REC Benefits: Carbon Footprint Reduction





Onsite Renewable Benefits: Depreciated Asset Use Energy Produced Energy resiliency Carbon Footprint Reduction Utility Rebate IRA ITC Incentives



#### **Updates to Energy Efficient Commercial Buildings Tax Deduction (179D)**

- Long-standing **tax deduction** for building owners
- Expanded for both private & tax-exempt\* entities

\*Added inclusion allows specified "**tax-exempt entities**" that own buildings to "**allocate**" 179D deduction amounts to "the person primarily responsible for **designing the property** in lieu of the owner of such property."

- Incentivizes commercial owners who retrofit or newly construct facilities to be energy efficient
- Increased deduction up to \$5/sq.ft.
- Reduced improved efficiency threshold to 25%
- Alternative deduction for energy efficient retrofit property allows comparison to baseline energy use intensity
- **3-year cap** (vs previous lifetime), allowing for **multiple projects over time**

#### Notable Criteria to Reach Maximum

- ✓ Qualifying property must:
  - Be within scope of ASHRAE 90.1
  - Be in service after 12/31/2022
- Qualifying improvements incl: HVAC & hot water systems, building envelope, interior lighting, and more
- Bonus deduction must meet prevailing wages and apprenticeship requirements\*
- Retrofit buildings must be in service 5+ years to qualify for deduction

| <b>Efficiency Gain</b><br>Over Baseline | Base<br>Deduction Rate | Bonus<br>Deduction Rate* |
|---|------------------------|--------------------------|
| 25% (min)                               | \$0.50 / sq.ft.        | \$2.50 / sq.ft.          |
| 30%                                     | \$0.60 / sq.ft.        | \$3.00 / sq.ft.          |
| 35%                                     | \$0.70 / sq.ft.        | \$3.50 / sq.ft.          |
| 40%                                     | \$0.80 / sq.ft.        | \$4.00 / sq.ft.          |
| 50% (max)                               | \$1.00 / sq.ft.        | \$5.00 / sq.ft.          |



## How Do Non-Profits Benefit from a Tax Deduction?

#### **Deduction Transfer**

The deduction is passed to a taxpaying entity through an "Allocation Letter" which transfers it to the system designer (architect/engineer/contractor) who then claims the tax deduction.

Non-profits can negotiate with the system designer to reach an amount that the system designer is willing to pay for the tax deduction.

#### Benefits:

- More efficient building/system design reducing total operating costs
- Reduced carbon footprint





MOB HVAC, Controls, + Lighting Upgrades



Scenario:

135,000 sq ft

3 Story MOB

HVAC, Lighting, & Controls

Upgrades: \$1,000,000

#### MOB UHVAC, Controls, + Lighting Upgrades Cash Purchase, No Incentives



|                                   | Year 1          | Year 2    | Year 3    | Year 4    | Year 5    | Year 6    | Year 7    | Year 8    | Year 9    | Year 10   | Year 11   | Year 12  | Year 13 | Year 14 | Year 15 |
|-----------------------------------|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|---------|---------|---------|
| Energy Savings<br>Utility Rebate  | 45,000<br>1,500 | 49,500    | 54,450    | 59,895    | 65,885    | 72,473    | 79,720    | 87,692    | 96,461    | 106,108   | 116,718   | 128,390  | 141,229 | 155,352 | 170,887 |
| 0<br>Total Annual Savings         | 46,500          | 49,500    | 54,450    | 59,895    | 65,885    | 72,473    | 79,720    | 87,692    | 96,461    | 106,108   | 116,718   | 128,390  | 141,229 | 155,352 | 170,887 |
| HVAC, Controls, Lighting Upgrades | 1,000,000       |           |           |           |           |           |           |           |           |           |           |          |         |         |         |
| Total First Costs                 | 1,000,000       |           |           |           |           |           |           |           |           |           |           |          |         |         |         |
| Annual Net Cash Flow              | (953,500)       | 49,500    | 54,450    | 59,895    | 65,885    | 72,473    | 79,720    | 87,692    | 96,461    | 106,108   | 116,718   | 128,390  | 141,229 | 155,352 | 170,887 |
| Cumulative Cash Flow              | (953,500)       | (904,000) | (849,550) | (789,655) | (723,771) | (651,298) | (571,577) | (483,885) | (387,424) | (281,316) | (164,597) | (36,207) | 105,022 | 260,374 | 431,262 |

#### **12.5 Year Simple Payback**



#### MOB UHVAC, Controls, + Lighting Upgrades Cash Purchase, 179d Incentives



|                                   | Year 1    | Year 2    | Year 3     | Year 4    | Year 5    | Year 6    | Year 7    | Year 8    | Year 9    | Year 10   | Year 11  | Year 12 | Year 13 | Year 14 | Year 15 |
|-----------------------------------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|---------|---------|---------|---------|
| Energy Savings                    | 45,000    | 49,500    | 54,450     | 59,895    | 65,885    | 72,473    | 79,720    | 87,692    | 96,461    | 106,108   | 116,718  | 128,390 | 141,229 | 155,352 | 170,887 |
| Utility Rebate                    | 1,500     |           |            |           |           |           |           |           |           |           |          |         |         |         |         |
| IRA 179d                          | 135,000   |           |            |           |           |           |           |           |           |           |          |         |         |         |         |
| Total Annual Savings              | 181,500   | 49,500    | 54,450     | 59,895    | 65,885    | 72,473    | 79,720    | 87,692    | 96,461    | 106,108   | 116,718  | 128,390 | 141,229 | 155,352 | 170,887 |
| HVAC, Controls, Lighting Upgrades | 1,000,000 |           |            |           |           |           |           |           |           |           |          |         |         |         |         |
| Total First Costs                 | 1,000,000 |           |            |           |           |           |           |           |           |           |          |         |         |         |         |
| Appual Net Cash Flow              | (818 500) | 49.500    | 54 450     | 50 805    | 65 885    | 72 /73    | 79 720    | 87 602    | 96.461    | 106 108   | 116 718  | 128 300 | 1/1 220 | 155 352 | 170 887 |
|                                   | (010,000) | (700,000) | (74.4 550) | (054.055) | (500.774) | (540.000) | (400 577) | (240.005) | (050,404) | (140.040) | (00 507) | 00,700  | 040.000 | 205 274 | 500,007 |
| Cumulative Cash FIOW              | (818,500) | (709,000) | (714,550)  | (004,055) | (588,771) | (516,298) | (430,577) | (348,885) | (232,424) | (140,316) | (29,597) | 98,793  | 240,022 | 395,374 | 000,26Z |

#### **179d Tax Incentive/Deduction Assumptions:**

Prevailing Wage, 40% Energy Efficiency Improvement \$4.00/sq ft deduction x 135,000 sq ft = \$540,000

#### **11 Year Simple Payback**

Non-Profit negotiates with System Designer; System Designer commits to purchase deduction for \$0.25 for every \$1 of tax deduction.

Negotiated amount will vary by system designer.

Non-Profit Payout = \$135,000



# **BUILDING A CLEAN ENERGY ECONOMY:**

A GUIDEBOOK TO THE INFLATION REDUCTION ACT'S INVESTMENTS IN CLEAN ENERGY AND CLIMATE ACTION

CLEANENERGY.GOV

JANUARY 2023, VERSION 2



THE WHITE HOUSE WASHINGTON

| <b>Programs Covered in 7</b>       | <b>This Chap</b> | ter                    |   |                  |
|------------------------------------|------------------|------------------------|---|------------------|
| Agency                             | IRA<br>Section   | Tax<br>Code<br>Section | Program Name  | Amount           |
| Department of the Treasury         | 13101            | 45                     | Production Tax Credit for Electricity from Renewables   | -                |
| Department of the Treasury         | 13102            | 48                     | Investment Tax Credit for Energy Property   | -                |
| Department of the Treasury         | 13103            | 48(e),<br>48E(h)       | Increase in Energy Credit for Solar and<br>Wind Facilities Placed in Service in<br>Connection with Low-Income Communities | -                |
| Department of the Treasury         | 13105            | 45U                    | Zero-Emission Nuclear Power Production<br>Credit  | -                |
| Department of the Treasury         | 13701            | 45Y                    | Clean Electricity Production Tax Credit   | -                |
| Department of the Treasury         | 13702(h)         | 48E                    | Clean Electricity Investment Tax Credit   | -                |
| Department of the Treasury         | 13703*           | 168(e)(3)<br>(B)       | Cost Recovery for Qualified Facilities,<br>Qualified Property, and Energy Storage<br>Technology                           | -                |
| Environmental Protection<br>Agency | 60103            | -                      | Greenhouse Gas Reduction Fund   | \$27,000,000,000 |
| Department of Energy               | 50141            | -                      | Funding for Department of Energy Loan<br>Programs Office  | \$3,600,000,000  |
| Department of Energy               | 50145            | -                      | Tribal Energy Loan Guarantee Program  | \$75,000,000     |

\*A description of this section appears in the summaries for sections 13701 and 13702.

The White House continues to define

project parameters and execution of

releasing funds.

## What are Healthcare Resources Saying?





October 5, 2022

#### Tax Credits for Clean Energy Provisions Available to Hospitals as Part of Inflation Reduction Act of 2022

#### AHA TAKE

These new incentives may be valuable to many hospitals and health systems in reducing costs and increasing environmental sustainability. The Internal Revenue Service is now developing regulations to provide guidance on these changes. Hospitals should consult with their accountants and tax professionals to determine how these provisions, and potentially others in the Inflation Reduction Act, may be beneficial to their organizations.

# Recapping the current challenges and opportunities

# Challenges

- Aging infrastructure
- Deferred maintenance
- Lack of risk resiliency
- Investment in patient focused technology

# **Opportunities**

- Energy Conservation Savings
- Investment Tax Credit
- 179D Deduction
- Alternate funding
   mechanisms





## **Funding Mechanisms**

|                                      | Cash     | Traditional Lease/<br>Bond* | PACE, EPAD (KY) |
|--------------------------------------|----------|-----------------------------|-----------------|
| Ownership of Project<br>Assets       | Customer | Customer/<br>Lessor         | Customer        |
| Cash Upfront                         | Yes      | No                          | No              |
| Credit Neutral                       | No       | No                          | Yes             |
| Term (Years)                         | N/A      | 5- 20                       | 20              |
| Able to Monetize Tax<br>Benefits     | Yes      | Yes                         | Yes             |
| Performance<br>Guarantee<br>Required | No       | No                          | No              |





## **Alternate Funding Comparison Recap**

| Option                      | Cost of<br>Money | Tax<br>Incentive<br>Eligible | Credit<br>Neutral | Cash Up<br>Front |
|-----------------------------|------------------|------------------------------|-------------------|------------------|
| Cash                        | N/A              | Yes                          | No                | Yes              |
| Tax Exempt<br>Bond or Lease | 4-5%             | Yes*                         | No                | No               |
| EPAD / PACE                 | 6.5-7%           | Yes                          | Yes               | No               |

\*15% reduction in incentive



PACE / EPAD Summary

- KY Energy Project Assessment District Act of 2015
- Known as Property Assessed Clean Energy (PACE) in over 30 other states, funding over \$1B in projects nationally
- Innovative mechanism to fund energy efficiency projects
- Project funded by financier and paid back over time through a voluntary assessment, via the local municipality
- The annual assessment is tied to the property and not the organization
- Off credit, off balance sheet
- The annual assessment is an expense that is offset by decreased operational expenses
- If divested, the assessment stays with the property

#### **Project Example**



#### **Current Infrastructure Need**

- Chiller plant redundancy
- 50+ year old steam plant
- Dehumidification of critical spaces

#### Innovation

- Get out of the "steam" business
- Leverage tax incentive to fund a portion of the project
- Evaluate alternate funding options

#### Technology

- Thermal Energy Storage
- Heat Recovery
- Desiccant Wheel

| Project     | Annual                   | Тах                   | Capital Purch | ase Scenario | EPAD Financing Scenario |                                       |  |  |
|-------------|--------------------------|-----------------------|---------------|--------------|-------------------------|---------------------------------------|--|--|
| Cost        | Savings                  | ings Incentive Simple |               | 9.64         | Project Term            | 20 years                              |  |  |
| \$5,000,000 | ,000 \$170,000 \$825,000 |                       | Payback       |              | Finance Rate            | 6%                                    |  |  |
|             |                          |                       | IRR           | 9%           | Annual Payment          | \$363,996                             |  |  |
|             |                          |                       | ROI           | 126.6%       | NPV                     | \$798.938                             |  |  |
| TRANE       |                          |                       | SIR           | 1.39         |                         | · · · · · · · · · · · · · · · · · · · |  |  |
|             |                          |                       | NPV           | \$2 577 790  |                         |                                       |  |  |

#### **ITC 48 Financial Benefit Example**

|                           | 0  | 1               | 2         | 3         | 4                                 | 5         | 6                          | 7          | 8          | 9          | 10       | total (10 Yrs.) |
|---------------------------|--|-----------------|-----------|-----------|-----------------------------------|-----------|----------------------------|------------|------------|------------|----------|-----------------|
| Annual Energy Savings     | \$0 \$   | 32,000 \$       | 35,200 \$ | 38,720 \$ | 42,592 \$                         | 46,851 \$ | 51,536 \$                  | 56,690 \$  | 62,359 \$  | 68,595 \$  | 75,454   | \$ 509,998      |
| Total Annual Savings      | \$0 \$   | 32,000 \$       | 35,202 \$ | 38,723 \$ | 42,596 \$                         | 46,856 \$ | 51,542 \$                  | 56,697 \$  | 62,367 \$  | 68,604 \$  | 75,464   | \$ 510,052      |
| Annual Project Investment | \$0_\$   | 22,232 \$       | 22,232 \$ | 22,232 \$ | 22,232 \$                         | 22,232 \$ | 22,232 \$                  | 22,232 \$  | 22,232 \$  | 22,232 \$  | 22,232   | \$ 222,321      |
| Total Investment          | <b>\$0 \$</b>  | 22,232 \$       | 22,232 \$ | 22,232 \$ | 22,232 \$                         | 22,232 \$ | 22,232 \$                  | 22,232 \$  | 22,232 \$  | 22,232 \$  | 22,232   | \$ 222,321      |
| Annual Net Cash Flow      | \$0 \$   | 9,768 \$        | 12,970 \$ | 16,491 \$ | 20,364 \$                         | 24,624 \$ | 29,310 \$                  | 34,465 \$  | 40,135 \$  | 46,372 \$  | 53,232   |                 |
| Cummulative Cash Flow     | \$0 \$   | 9,768 \$        | 22,738 \$ | 39,229 \$ | 59,593 \$                         | 84,217 \$ | 113,527 \$                 | 147,992 \$ | 188,127 \$ | 234,499 \$ | 287,731  | \$ 287,731      |
| Project Assumptions:      | Total (  | Cost Of Project |           |           | \$850,000                         | Ann       | ual Energy Sav             | vings      |            |            | \$32,000 |                 |
|                           | IRA Tax Credit<br>Annual Project Payment<br>Project Term (Years) |                 |           | \$        | \$ 595,000 Energy Escalation Rate |           |                            |            |            | 10.00%     |          |                 |
|                           |  |                 |           |           | \$22,232                          | Ope       | Operational Savings        |            |            |            | \$0      |                 |
|                           |  |                 |           | 20        |                                   |           | Operations Escalation Rate |            |            | 0.00%      |          |                 |
|                           | Projec   | t Finance Rate  |           |           | 6.00%                             | Сар       | vital Cost Avoid           | ance       |            |            | \$0      |                 |
| Financial Benchmarks:     | NPV  |                 |           |           |                                   |           | 705,785                    | 5          |            |            |          |                 |



## **Funding Opportunities**





# Additional Resources



## Greater efficiency supports patient care.



# **Questions?**

