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Emerging Energy Concepts
38th Annual AHCA Seminar and Expo
September 18-20, 2022

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***Reaching Climate and Energy Goals by
Implementing Energy Transition Plans***

Course Number: AHCA2022.02

Credit Designation: 1 LU| HSW

AIA CES Provider Number: E240

September 18, 2022



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1

OBJECTIVE

Learn how to benchmark a facility and its processes of energy consumption.

2

OBJECTIVE

Understand how to evaluate best practices and processes.

3

OBJECTIVE

Gain the ability to identify and establish identifiable goals for energy and emissions

4

OBJECTIVE

Develop a coordinated strategy to guide the facility to achieve and verify the benefits of the implemented measures

AGENDA



- Where we are now
- How this affects hospitals and healthcare facilities
- Steps you can take
- Success stories
- Conclusion
- Questions and discussion

Speakers



Bill Bradford, P.E.
Principal-Energy,
Sustainability &
Resiliency



Wade Conlan,
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Commissioning &
Energy Discipline
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Mat Coalson
Mechanical &
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Climate Change 2022: Impacts, Adaptation and Vulnerability

REPORT
MULTIMEDIA

The Working Group II contribution to the Sixth Assessment Report assesses the impacts of climate change, looking at ecosystems, biodiversity, and human communities at global and regional levels. It also reviews vulnerabilities and the capacities and limits of the natural world and human societies to adapt to climate change.

READ THE REPORT

AUTHORS



U.S. SECURITIES AND EXCHANGE COMMISSION

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Press Release

SEC Proposes Rules to Enhance and Standardize Climate-Related Disclosures for Investors

FOR IMMEDIATE RELEASE

2022-46

NEWSROOM ▶ POST

The evidence is clear: the time for action is now. We can halve emissions by 2030. _____

FOLLOW



ENGAGE

There are many ways to engage with the IPCC



LEARN MORE



BRIEFING ROOM

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

JUNE 30, 2022 • STATEMENTS AND RELEASES

*Health Sector Steps Up to Protect Public Health and Lower
Costs*



ASHRAE Position Document on Building Decarbonization

Approved by ASHRAE Board of Directors
June 26, 2022

Expires
June 26, 2025



Shaping Tomorrow's Built
Environment Today



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ASHRAE AND THE INTERNATIONAL CODE COUNCIL TO CO-SPONSOR WHOLE LIFE CARBON APPROACH STANDARD

Call for new committee members open through September 26

How this affects hospitals and healthcare facilities

Health care: global climate footprint

- Health care's global footprint is equivalent to 4.4% of global net emissions
- Global health care climate footprint is equivalent to the annual greenhouse gas emissions from 514 coal-fired power plants
- If the health sector were a country, it would be the fifth largest emitter on the planet

[HealthCaresClimateFootprint_092319.pdf \(noharm-global.org\)](#)



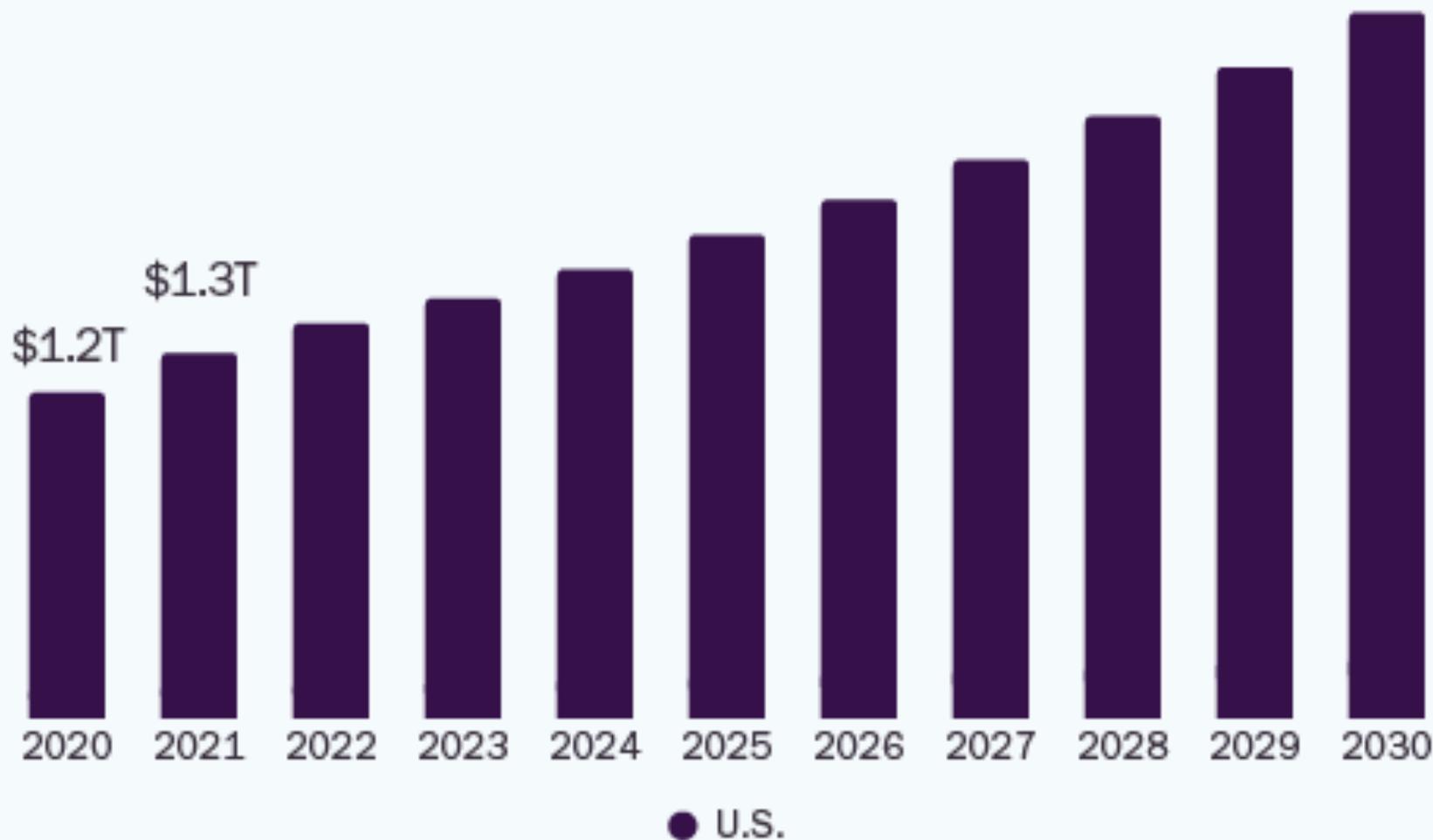
Sources of health care's climate footprint

- Health care contributes to GHG emissions through energy use, transport, and product manufacture, use and disposal
- Emissions from health care facilities and vehicles (Scope 1) make up 17% of the sector's worldwide footprint
- Indirect emissions from purchased energy sources (Scope 2) comprise another 12%
- 71% of emissions are derived from the health care supply chain (Scope 3)
- Energy makes up over half of health care's climate footprint when measured across all three scopes



U.S. Hospital Facilities Market

size, 2020 - 2030 (USD Trillion)



GRAND VIEW RESEARCH

7.6%

U.S. Market CAGR,
2022 - 2030

Source:
www.grandviewresearch.com

What can you do to prepare?

- Establish where you currently are
- Set energy, emissions and water goals
- Develop a strategy, with timeline and milestones, to determine future actions required to achieve your goals
- Implementation
- Measurement and verification
- Compare against recognized benchmark
- Innovate and improve



Establish where you currently are (e.g., benchmark)

- Document existing energy uses, water sources and uses, emissions, then compare against recognized benchmarks
- Survey best practices and latest technologies for efficiency/sustainability targets and strategies
- Benchmark against Peer and Aspirant groups and established best practices



Establish your energy, emissions and water goals

- **Stepping-stone goals** (action steps which allow you to reach bigger goals)
- **Short term goals** (month, six months, year, ...) which show proof of concept and lead the way to your long-term goals
 - Include supply, conservation and efficiency reduction measures
 - Focus on strategies for each of the Scope 1 and 2 GHG emissions with an emphasis on supply side and demand side strategies

Things
you
can
do!

Establish your energy, emissions and water goals

- **Mid-term goals** – which build on a series of short-term goals
 - Target dramatic reduction of Scope 1 and 2 GHG emissions
- **Long-term goals** - which build upon your short- and medium-term goals
 - Focus on reducing GHG emissions related to remaining building energy use and Scope 3 supply chain activities
- **Aspirational goals** – the goals which will lead you to become “best-in-class”



Goals

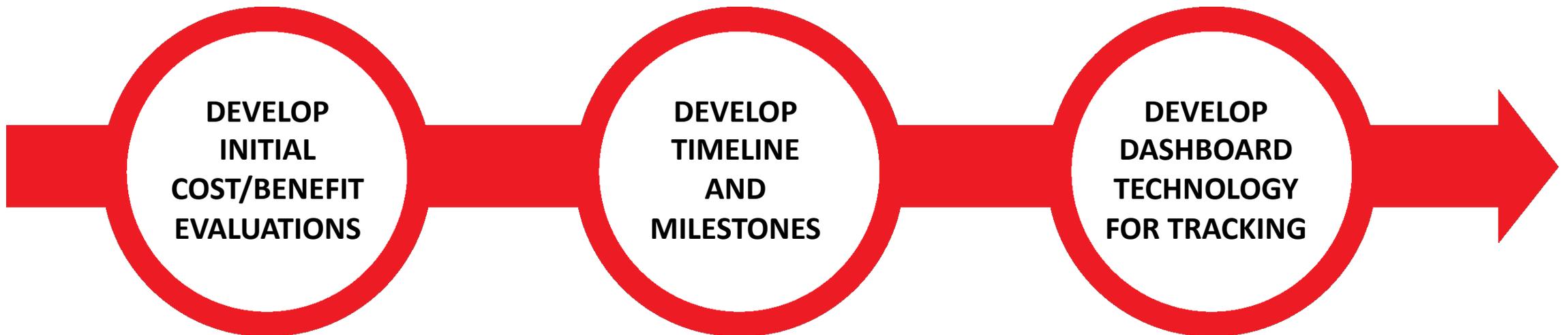
Evaluate and develop strategy

- Develop a list of:
 - Projects and initiatives necessary to accomplish these goals
 - Energy and carbon reduction amounts associated with each target
 - CapEx or OpEx budget requirements needed for each goal
 - Financial impact(s) implementation of projects and initiatives will have on the bottom line



Implementation

- Develop a strategy with timeline and milestones future actions required to achieve these goals
 - Develop initial cost/benefit evaluations for each strategy
 - Develop timelines and milestones for each strategy
 - Develop a dashboard technology and other ongoing techniques to track and report the benefits of your implemented measures



Feedback

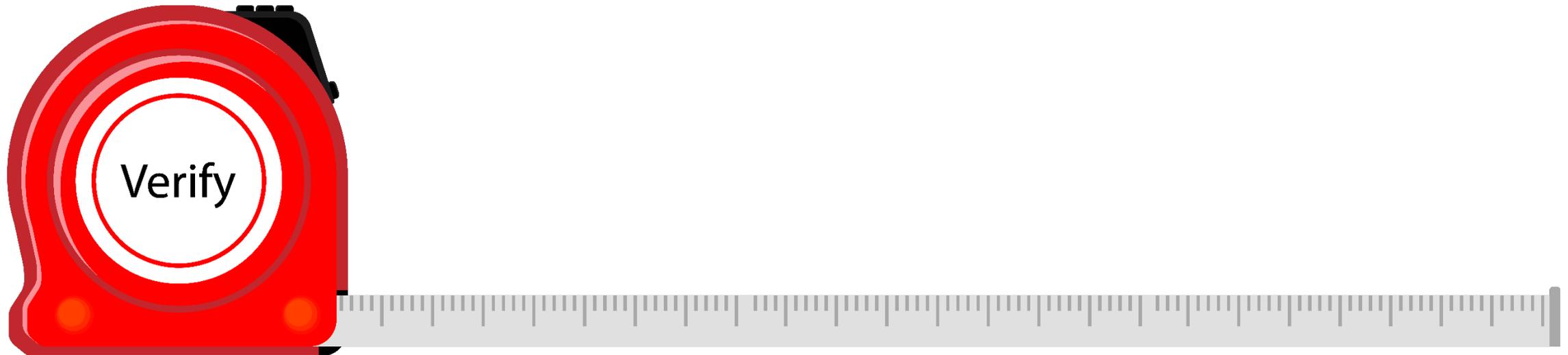
- Implement quick hits/low-hanging fruit to illustrate the benefits of the process
- Implement feedback loops with higher-ups:
 - Answer questions which may arise
 - Receive feedback and mitigate concerns
 - Receive input so you can revise course as needed
- Establish a regular reporting cycle to
 - Keep your constituents updated
 - Receive input
 - Celebrate successes



FEEDBACK

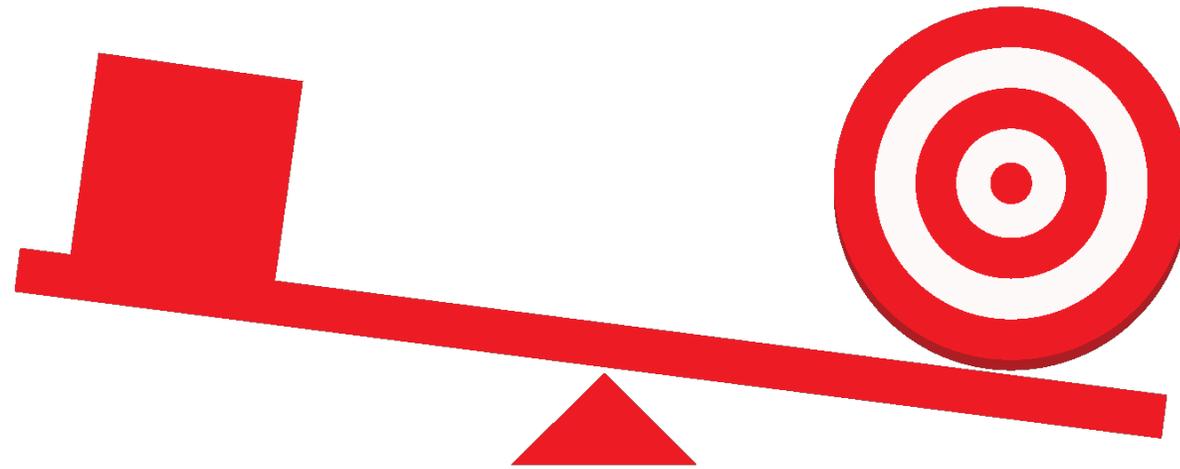
Measurement & Verification

- Verify systems and equipment are operating as originally intended and energy and emissions reductions are actually occurring
- Choose (or develop) a dashboard technology or other ongoing techniques which you can implement to continuously track and report the benefits of your implemented measures



Compare against recognized benchmarks

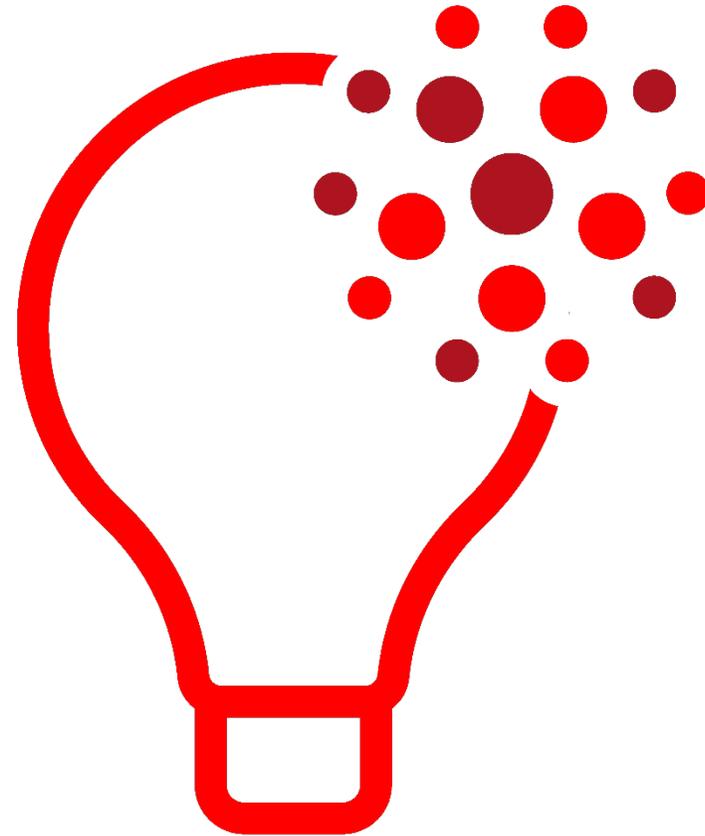
- EPA's ENERGY Star Portfolio Manager
- ASHRAE Building EQ
- Energy Use Intensity (EUI)
- Water Use Intensity
- EPA's GHG Management Self Assessment/Benchmarking Resource
- CRU's Emissions Analysis Tool
- Carbontrust – Energy Benchmarking Tool



COMPARE

Innovate and improve

- Continuously measure your progress against industry energy and carbon reduction milestones and targets
- Leverage new technologies, regulations and/or incentives to continually improve
- Update goals as new metrics and opportunities present themselves



INNOVATE



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Conclusions

- Hospitals in the United States and across the globe have already done much of the heavy lifting by testing out these ideas.
- Now it's time to apply the cost-effective lessons they have learned.
- After all, our mission is our patient's health. And a cleaner greener future can help ensure that health!



Questions and discussion



Speakers



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Thank you for your attention!

