

How Health Care Organizations Can Use the Inflation Reduction Act to Reduce Costs, Enhance Resilience, and Lower Their Environmental Footprint

Celynne Balatbat, National Academy of Medicine; **Walt Vernon, MBA, JD, LLM**, Mazzetti; **Antonia Herzog, PhD, MS**, Health Care Without Harm; **Terri Scannell, MBA**, OhioHealth; and the **Policy, Financing, and Metrics Working Group** of the National Academy of Medicine’s Action Collaborative on Decarbonizing the U.S. Health Sector

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Key Takeaways

- The Inflation Reduction Act provides financial incentives that can be used to mitigate greenhouse gas emissions while also solving health care organizations’ chronic needs for capital renewal, deferred maintenance, improved resilience, and lower operating costs.
- The Inflation Reduction Act should be used as part of an integrated energy supply strategy to optimize benefits.
- Recent changes in available technologies, and the National Electrical Code, coupled with the CMS Categorical waiver, amplify the potential benefits of the IRA opportunities.

Introduction

Health care organizations are grappling with myriad challenges—including mounting labor pressures, inflation, and a shifting payor landscape—that demand immediate attention. However, as pressing as these concerns may be, the imperative to address the climate crisis cannot be overlooked or delayed. It is more critical than ever to adopt sustainable practices and reduce the environmental impact of health care operations. Recognizing the significance of this dual challenge, this paper provides health care organizations with tools to foster resilience and sustainability while curbing costs by accessing the suite of incentives provided in the Inflation Reduction Act (IRA) (Inflation Reduction Act of 2022, H. R. 5376). The IRA has immense potential to empower health care institutions to make tangible strides in mitigating their environmental footprint. This paper outlines several key components of this legislation to demonstrate how their implementation can enable hospitals to weather the current economic storms and pave the way for a greener and more sustainable future. By identifying and harnessing these important tools, health care organizations can actively contribute to both the well-being of their communities and the preservation of the planet.

Climate Change is a Public Health Crisis and Health Systems Need to Do Their Part and Decarbonize

For decades, there has been consensus among the scientific community that human activity is contributing to climate change. It is clear that there is an urgent need for dramatic action to avoid the worst impacts of climate change. Leading scientists have recognized that

limiting global warming to 1.5°C requires rapid, deep, and sustained reductions in global greenhouse gas emissions, including reducing global carbon dioxide emissions by 45% by 2030 relative to 2010 levels and to net zero around mid-century as well as deep reductions in other greenhouse gases (UNFCCC, 2021).

The outsized greenhouse gas footprint of the global health care system, and the U.S. health care system in particular, is equally clear. The health care sector contributes at least 8.5% of total U.S.-based greenhouse gases responsible for climate change, and as much as 4.4% of total global greenhouse gas emissions (Health Care Without Harm and Arup, 2019). This fact, coupled with the reality that the changing climate inflicts the severest injury on those with the least re-

sources, exposes the moral imperative for the U.S. health care system to take action to decarbonize its facilities and operations (National Academies of Sciences, Engineering, and Medicine, 2022). At a minimum, taking steps to lower the environmental footprint of the U.S. health care sector can enhance its resilience against the threats of severe weather and wildfire events, which are increasing in both frequency and strength (Romanello et al., 2022). While the connection between decarbonization and protection against severe weather may not be immediately evident, it is important to note that certain measures aimed at mitigating the environmental impact of health care operations can also enhance the sector's ability to withstand and adapt to climate-related challenges.

While the imperative to reduce environmental carbon emissions is well documented, the pathway to decarbonization has been less straightforward and there has been little widespread progress by health care organizations to date (Romanello et al., 2022). The health care system has faced a set of layered barriers in reducing climate change emissions that have stalled progress. Notably, a significant challenge is the need for financial resources to support efforts toward decarbonization. Projects that reduce energy consumption or utilize renewable energy require large upfront investments that have uncertain future cost savings. With limited capital resources, health care organizations are often forced to invest in measures that improve revenue and margins rather than measures that benefit public health and the environment.

However, at this moment, the barriers are beginning to fall away. The IRA represents one of the most significant federal actions to address climate change in decades and provides a necessary lever to drive change within the health sector.

This landmark legislation provides billions of dollars in strategic investments between 2023 and 2033 to advance clean energy, environmental justice, pollution reduction, and climate resilience programs. In particular, the IRA provides substantial incentives, in the form of tax credits, to encourage many industries and organizations to move toward decarbonization—including health care organizations. These tax credits include incentives to encourage the uptake of a variety of renewable energy sources, to help health systems transition their fleet to electric vehicles, to install electric vehicle charging infrastructure, and to improve the energy efficiency of existing commercial buildings—like health care facilities—as well as new construction projects. The IRA can also cover a project's development costs, including legal, consulting, installation, and engineering contracts and fees.

In addition to supporting health care organizations in their decarbonization efforts, the IRA offers the opportunity for health care organizations to improve resilience. Climate change will likely increase the frequency of extreme weather and wildfire

events, and the IRA provides funding for organizations to invest in resources that will enable better preparedness for such events. Furthermore, the IRA also provides enhanced benefits in what it defines as an “energy community,” which encompasses brown-field sites, metropolitan statistical areas or non-metropolitan statistical areas with significant direct employment or local tax revenues related to coal, oil, or natural gas, and census tracts affected by coal mine closures or retirement of coal-fired electric generating units, alongside “low-income communities” (Inflation Reduction Act, 2022). Thus, projects built in these census tracts and counties could obtain larger benefits from the IRA, making their construction even more financially attractive.

The IRA is especially promising for driving change across the health sector due to the magnitude of incentives, expanded timeframe for implementation, broad access to technologies, and new financing structures.

Several features of the IRA are worth highlighting, especially the Investment Tax Credit (ITC), which is one of the most significant incentives in the legislation.

First is the magnitude of incentives. For example, before the IRA, ITC incentives were capped at 26% for assets put into service in 2022, 22% for assets put into service in 2023, and no incentives thereafter (Inflation Reduction Act, 2022). After the IRA, ITC incentives have now increased to as much as 40%, and increase even further if the project is located in low-income communities and/or energy communities, as defined by the IRA (Inflation Reduction Act, 2022). This sizable increase in the ITC makes projects that were previously inconceivable now feasible.

Second, the IRA expands the implementation timeframe for many incentives. Previous ITC incentives, which the IRA has now expanded and extended, were scheduled to be stepped down in 2023 and to expire thereafter. The IRA now extends the incentives through 2033, creating the necessary certainty to plan these investments over longer timeframes. This expanded timeframe means that health care owners do not need to rush to capture incentives within a two-year timeframe and can take the time to think comprehensively about their energy needs. The expanded timeframe will also allow health care owners to design strategies that ensure construction projects are optimally resilient, cost-effective, and responsive to environmental goals and commitments.

Next, the IRA expands the pool of technologies that can be accessed through incentives. Historically, Internal Revenue Service (IRS) regulations for the ITC have incentivized solar and wind energy. The IRA extends the ITC to encompass on-site energy storage assets (including electrical and thermal storage), microgrid controllers, and thermal storage. This change is revolutionary, especially considering the other changes in regulation and technology availability that the IRA has afforded. This expanded set

of on-site energy storage assets is critical for addressing on-site resilience, enabling health care organizations to avoid unnecessary risks associated with utilizing fewer energy storage assets. Just as an investor should never put all their assets into a single stock, but rather seek to create a diversified portfolio so that the balance of risks modulates unanticipated shocks, a health care organization will benefit from a variety of energy generation, conversion, and storage assets that complement each other and optimize both financial and operational risks. The IRA makes this diversification financially possible for many organizations.

Finally, the IRA provides new financing structures and changes to previous tax credits. The biggest change is the direct payment option, also called elective pay. Under previous IRS regulations, only taxable entities could take advantage of clean energy tax incentives. However, most U.S. health care systems are tax-exempt. Under these previous regulations, tax-exempt entities were forced to utilize third-party finance agreements in which a for-profit third party provided the initial capital for a renewable project and took the entire tax benefit, passing only a portion of the tax credit savings back to the tax-exempt organization. Such relationships were problematic because health care organizations generally lacked sophisticated advisors to help them analyze, negotiate, and optimize these arrangements, raising concerns that for-profit third parties were maximizing their profit at the expense of tax-exempt organizations.

The IRA simplifies the process of investing in upfront expenses that can assist hospitals and other health care organizations in minimizing their direct on-site emissions. Under the IRA, the tax-exempt entity can now take the tax benefit as a direct payment from the federal government rather than working with a for-profit third party. Alternatively, the tax-exempt entity can sell (i.e., transfer) the tax benefit to a third party, but not necessarily the renewable energy system developer (Internal Revenue Service, 2023). As a result, all the benefit from this investment accrue to the tax-exempt entity. This change will facilitate the deployment of financial structures that are much more favorable to health care organizations, greatly accelerating the opportunity to utilize these critical emission-reducing resources. It is important to note, however, that while this change promises significant advantages, the administrative burden associated with participation in the IRA program could potentially pose challenges to certain organizations, raising concerns about the practical accessibility of these benefits.

These changes come at a critically important time, as health care organizations are facing significant financial pressures and backlogs of deferred maintenance.

The health care industry is facing significant challenges, including macroeconomic factors such as inflation, high labor expenses, and volatile markets. Nonprofit hospitals have experienced margins that barely break even, partly due to an 11.1% rise in

labor costs since 2021 (KaufmanHall, 2022). Health care systems have witnessed a median decline of 7% in their investments, along with declines in cash on hand (Fitch Ratings, 2023). Analysts predict that operating difficulties will intensify further by the end of 2023 and that it will take a considerable amount of time before margins return to pre-COVID-19 levels (Patel and Singhal, 2023). "Given sector pressures, Fitch expects investments of capital assets to continue at a modest pace, near depreciation, with a focus on outpatient and technology investments that drive profitability improvements and cost-efficient growth" (Muio, 2023).

Health care systems also face considerable backlogs of deferred maintenance. *Health Facilities Management's 2022 Hospital Construction Survey* underscores the challenging landscape many health care facilities face: 35% of hospitals surveyed said they have performed an emergency repair on a piece of equipment after deferring maintenance on it (Burmahl and Morgan, 2022). Notably, 86% said the cost of emergency projects was higher by an average of nearly 18% in the last three years (Burmahl and Morgan, 2022).

While these financial pressures mount, health care organizations are also facing demands for increased resilience. The number and intensity of climate-related severe weather events are increasing and committed warming ensures that this trend will continue (Clarke et al., 2021; Zhou et al., 2021). Severe weather impacts health care facilities in numerous ways, including the interruption of utility services and impeding staff and community members from traveling to health care facilities (Robertson, 2022). As critical facilities, health care buildings must be prepared to withstand the changing climate and associated risks from severe weather events. This preparation takes resources but can also generate substantial returns on investment by minimizing future operational disruptions.

Resilience, sustainability, and decarbonization go hand in hand, and progress in any or all can help ensure adequate preparedness for a future where continued and growing climate change is a reality. Efforts to enhance resilience can support initiatives aimed at achieving decarbonization and sustainability. For instance, facilities designed to withstand extreme events and prioritize energy and water efficiency have the potential to deliver health care services reliably as they will be able to operate autonomously for longer periods when there are limitations or interruptions in energy sources.

In many cases, the IRA can offer valuable solutions to the climate challenges that health care organizations confront, and there are a variety of ways that health care organizations can take advantage of the IRA's unique opportunities.

Technology, regulation, financing structures, energy procurement, and the climate are all evolving quickly. Therefore, de-

termining the right strategy for accessing the incentives the IRA provides is akin to solving simultaneous equations while also future-casting—in the context of existing systems—to ensure optimal outcomes.

Crafting an optimal energy strategy for a specific portfolio of buildings involves weighing many variables, including deferred maintenance backlogs, capital renewal requirements, energy procurement prospects, and alignment with IRA mandates. It also necessitates addressing the need for enhanced resilience, integrating facility master plans, and evaluating site feasibility. Overlaying these requirements with the possibilities provided by the IRA may empower many health care organizations to not only achieve their greenhouse gas reduction goals but also pursue other critical investments.

Most health care organizations engage in some form of facilities master planning. In architecture, form follows function, and as such, health system master plans should evolve to respond to organizational needs for changes to service delivery. Facility master plans should, therefore, be a subset of an overall strategic plan. These master plans will usually include needed changes, expansions, and disposal of various real estate assets, and as such, their creation necessitates considering necessary modifications for capacities and configurations of existing infrastructure systems (Cahnman, 2020). These modifications are likely to require space, especially if the development plan includes significant amounts of solar power generation. Thinking through which buildings will be served by new systems, what new capacities will be needed, and how to best configure new systems to meet master plan needs should drive decision making. Provisions from the IRA can also be leveraged to help reduce the incremental costs of renewable energy systems for new buildings.

All this work must occur in the context of a particular location's energy procurement situation. Years ago, energy procurement was a simple affair, usually consisting of telling the one local utility company that an energy connection was needed. At that point, costs were fixed and rules were simple. Today, energy markets have evolved, and the ability to contract for various forms of energy has changed dramatically. Energy in the United States is regulated at both the federal and state levels, so the optimal procurement strategy will vary depending on location.

Moreover, different states are moving at different paces with respect to air quality and other environmental regulations. States also offer a wide range of incentives for the installation of renewable energy and these programs, procurement options, and incentives continue to evolve. These multiple variables make planning for an optimal energy system a complex endeavor.

In conclusion, it is important to recognize that the incentives offered by the IRA are not just about installing renewable energy projects. The IRA provides the opportunity for health care facilities to catch up on deferred maintenance and needed capital renewal; to improve system re-

silience; to support project development, including offsetting the necessary cost of on-site generation systems; to improve operating margins in a fiscally challenged industry; and to reduce the greenhouse gas emissions of health care organizations, providing health benefits to their employees and the communities they serve.

Implementing an optimal energy strategy, from both the technical and financial perspectives, is not trivial. However, development costs—such as legal, consulting, installation, and engineering fees—can be paid for through provisions set by the IRA, making the implementation of such systems more attractive. Health care organizations today face an extremely challenging set of circumstances. With the help of the IRA, it is now possible for the industry to do their part to address the climate crisis, while still attending to their own needs.

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Author Information

Celynne Balatbat was the Special Assistant to the NAM President at the National Academy of Medicine during the drafting of this publication. **Walt Vernon, MBA, JD, LL.M.**, is Principal, Chief Executive Officer at Mazzetti. **Antonia Herzog, PhD, MS**, is Director of Climate Policy and Advocacy at Health Care Without Harm. **Terri Scannell, MBA**, is Principal Advisor of Sustainability and ESG at OhioHealth.

Walt Vernon, Antonia Herzog, and **Terri Scannell** are members of the **Policy, Financing, and Metrics Working Group** of the National Academy of Medicine's Action Collaborative on Decarbonizing the U.S. Health Sector, along with **Don Berwick** of the Institute for Healthcare Improvement; **Elizabeth Fowler** of the Center for Medicare and Medicaid Innovation, U.S. Centers for Medicare and Medicaid Services; **Jonathan B. Perlin** of The Joint Commission; **Alexis Ahlstrom** of UnitedHealth Group; **George Barrett**, formerly of Cardinal Health; **Eric Berzon**, formerly of Kaiser Permanente; Stuart Block of Cardinal Health; **Rebecca Meyers** of Cardinal Health; **David Blumenthal**, formerly of The Commonwealth Fund; **Claire Brindis** of the University of California, San Francisco; **Doris Browne**, formerly of the National Medical Association; **Christopher Chen** of HCA; **Matthew J. Eckelman** of Northeastern University; **Kathy Gerwig** of Health Care Without Harm; **Michelle Hood** of the American Hospital Association; **Mark Howell** of the American Hospital Association; **Cristina Indiveri** of Vizient; **Nicolette Louissaint** of the Healthcare Distribution Alliance; **Teddie Potter** of the University of Minnesota School of Nursing; **Abby Pratt** of Advanced

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Correspondence

Questions or comments should be directed to Walt Vernon at walterv@mazzetti.com, Antonia Herzog at ahertzog@hcwh.org, or Terri Scannell at terri.scannell@ohiohealth.com.

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