



Financial Impacts of Building Energy Codes for Tribal Nations

Introduction

Building energy codes set minimum requirements for the energy-efficient design and construction of residential and commercial buildings. For Tribal Nations, energy codes are more than construction standards; they are tools to improve housing affordability, reduce Tribal operating expenses, strengthen energy sovereignty, and increase community resilience.

Many Tribal Nations face unique energy cost challenges. Rural locations, harsh and changing climates, aging housing stock, limited infrastructure, and higher rates of energy insecurity can lead households and Tribal governments to spend a larger share of their income on energy than the national average (see energy burden below). Energy codes can help address these challenges by ensuring that new construction and major renovations are energy efficient.

Codes Reducing Energy Burden

Energy burden is commonly defined as the percentage of household income spent on energy costs. Many Tribal households experience elevated energy burdens due to older, inefficient housing, limited housing availability, reliance on delivered fuels such as propane, and exposure to extreme winter temperatures. Energy codes help lower energy burden by reducing the energy required to heat, cool, and operate homes.

Energy Code Financial Benefits for Tribes

Buildings constructed to current energy code standards consume less energy throughout their lifetime, resulting in lower operating costs and more predictable budgets. Reduced utility expenditures allow Tribal governments to redirect funds toward critical community services, infrastructure improvements, housing programs, and economic development initiatives. Energy codes deliver:

- **Energy Cost Savings:** Energy-efficient buildings deliver both short- and long-term utility bill savings, often with relatively short, simple payback periods.
- **Community and Health Benefits:** Lower utility costs help households and businesses keep more money circulating within local economies. In addition, improved building performance is linked to healthier indoor environments and fewer public health impacts.
- **Economic Development Opportunities:** Adopting energy codes can support local workforce development in construction, HVAC installation, energy auditing, insulation, and code enforcement.
- **Public Sector Financial Benefits:** State, Tribal, and local governments can see lower operating costs for buildings, reduced energy assistance burdens, and lower emergency response costs during extreme weather.
- **Operations and Maintenance (O&M) Savings:** High-performance buildings generally experience:
 - Lower HVAC operating costs
 - Reduced equipment wear and tear
 - Improved moisture control
 - Fewer mold and condensation issues
 - Longer equipment life
- **Improved Building Durability:** Better insulation, moisture management, and air sealing can reduce maintenance and repair costs caused by mold, ice dams, condensation, and structural deterioration.
- **Increased Building Value:** Efficient homes have been found to sell for 3–5% more on average, while energy-efficient commercial buildings can sell for nearly 13% more¹. This is due to lower operating expenses and improved net operating income.

¹The Business Case for Energy Efficient Buildings, USEPA, Energy Star, <https://www.energystar.gov/buildings/save-energy-commercial-buildings/finance-projects/business-case>

Life-Cycle Cost Savings

When evaluating energy codes, financial performance is typically assessed using life-cycle cost analysis rather than initial construction cost alone. Life-cycle cost analysis considers:

- Initial construction costs
- Utility savings
- Maintenance expenses
- Equipment replacement costs
- Inflation and future energy prices
- Financing costs

Research conducted by the U.S. Department of Energy and Pacific Northwest National Laboratories consistently finds that modern energy codes generate positive life-cycle savings in most climates across the United States. Although energy-efficient construction measures may modestly increase upfront costs, the resulting energy savings generally exceed those costs over the life of the building.

Resilience as a Financial Benefit

Resilience is often viewed as a safety or emergency preparedness issue, but it also has significant financial implications.

As severe weather events become more frequent and utility costs continue to rise, resilient buildings provide long-term financial protection. Buildings constructed to recent energy codes retain heat longer during winter outages and stay cooler longer during summer heat events. Improved insulation, air sealing, and efficient building envelopes help maintain safe indoor temperatures when electrical or fuel systems are disrupted.

For Tribal Nations, resilience-related financial benefits include:

- Reduced emergency shelter costs during outages
- Smaller backup generators that use less fuel
- Reduced risk of frozen pipes and building damage
- Lower disaster recovery expenses
- Improved continuity of critical community services

Supporting Tribal Economic Development Through Workforce Development

Energy code adoption can create economic opportunities for Tribal communities by increasing demand for skilled construction and energy-related services.

Potential workforce opportunities include:

- Building inspectors
- Energy auditors
- HVAC technicians
- Insulation installers
- Building performance specialists
- Home energy raters
- Commissioning professionals

Investing in workforce development for energy-efficient construction creates local employment opportunities while building long-term community capacity. Keeping construction, inspection, and energy expertise within the community can also reduce reliance on outside contractors and consultants.

Housing Affordability Considerations

Some concerns are often raised regarding the impact of energy codes on housing affordability. Energy-efficient construction measures may increase initial construction costs, particularly in areas with limited contractor availability or higher transportation costs for building materials.

However, focusing solely on construction costs can overlook the total cost of homeownership. A home that costs slightly more to build but substantially less to operate may be more affordable over time than a less-efficient home with higher monthly utility bills.

For Tribal Housing Authorities and housing programs, evaluating affordability should include both construction costs and projected energy expenses over the life of the home.

Energy Sovereignty and Infrastructure Benefits

Many Tribal Nations have established goals related to energy sovereignty, self-determination, and long-term infrastructure resilience. Energy codes support these goals by reducing overall energy demand and maximizing the value of investments in renewable energy systems, battery storage, and microgrids.

Newer code-compliant buildings require less energy to operate, which means solar arrays, battery systems, and backup generators can often be smaller and less expensive. This can reduce infrastructure costs while improving community energy security.

In communities pursuing renewable energy development, energy efficiency is often the most cost-effective first step because it reduces the amount of energy that must be generated, stored, or purchased.

Conclusion

For Tribes, building energy codes are an investment in long-term community sustainability. Although energy-efficient construction may require a modest upfront investment, the resulting reductions in utility and maintenance costs can return substantial financial benefits over a building's life.

Current energy codes can help reduce energy burden, improve housing affordability, strengthen community resilience, support workforce development, and advance Tribal energy sovereignty goals. As Tribal Nations continue to invest in housing, public facilities, and infrastructure, energy-efficient code-compliant construction offers an opportunity to lower long-term costs while creating healthier, more durable, and more resilient building communities.

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Michigan Tribal Code Initiative

Who We Are and How We Work

The Inter-Tribal Council of Michigan (ITCM) is a non-profit organization that serves as a forum and advocacy group for 12 federally recognized Native American Tribes in Michigan.

The Bay Mills Indian Community (BMIC) is a federally recognized Ojibwe Tribe located in Brimley, Michigan.

The Midwest Energy Efficiency Alliance (MEEA) is a collaborative network, promoting energy efficiency to optimize energy generation, reduce consumption, create jobs, and decrease carbon emissions in all Midwest communities.

Slipstream is a nonprofit that develops and scales energy efficiency programs with a focus on climate solutions for buildings.

