



RESPOND → PLAN → RETURN STRONGER

How Going Green Can Financially Help Your Business

PRESENTED BY

Michael Peel, Statewide Sustainability Director, Local First Arizona



Local First Arizona Mission

THINK LOCAL. BUY LOCAL. BE LOCAL.

Local First Arizona is a nonprofit organization that celebrates independent, locally owned businesses. We support, promote and advocate for a strong local business community and raise public awareness of the economic and cultural benefits provided by strong local economies. Local businesses contribute to a sustainable economy for Arizona and build vibrant communities we're all proud to call home.

Local First Arizona Impact

WHEN YOU SPEND HERE
your money stays here



LOCAL
— vs. —
NON-LOCAL



For every **\$100** spent at a locally owned business, **\$43 remains in the economy.**

For every **\$100** spent at a non-locally owned business, **only \$13 remains in the economy.**

Local First Arizona Bigger Picture

Larger Goals

We envision an Arizona that is:

- economically resilient and increasingly self-reliant
- economically inclusive of all residents, who have widespread opportunities to succeed
- thriving, entrepreneurial & innovative with access to capital
- environmentally sustainable with businesses in the lead

Local First Arizona Sustainability

Larger Goals



Environmental sustainability goes hand in hand with economic sustainability in ensuring that our communities can look forward to prosperous futures for all. Major goals of our team in helping our members be more sustainable include the following:

- Reduce operating costs by saving on utilities
- Reduce energy, water, waste, carbon emissions
- Educating businesses, employees, and patrons
- Preparing for a future with a changing climate
- Attract and retain clients, customers, and employees

EPA Sure Energy Savers

Overview

- According to the EPA, it is easy to get started improving the energy efficiency of your facility with little expertise or money.
- There are many reliable, low-risk, high-return actions that you can do, and are relatively simple.
- If resources permit, undertaking a comprehensive energy efficiency program, with the assistance of a professional if needed, would yield even greater savings.
- However, while you are considering a comprehensive program at least implement as many of the actions from the following list that you can to start saving now.

EPA Sure Energy Savers

Lighting (Part 1)

- Turn off lights (and other equipment) when not in use. High utility costs often include paying for energy that is completely wasted by equipment left “on” for long periods while not in use.
- Replace incandescent light bulbs with ENERGY STAR qualified LEDs or CFLs, wherever appropriate for savings.

EPA Sure Energy Savers

Lighting (Part 2)

- Install switch plate occupancy sensors in proper locations to automatically turn lighting off when no one is present, and back on when people return. Even good equipment can be installed wrong, so do not install the sensor behind a coat rack, door, bookcase, etc. It must be able to “see” an approaching person’s motion to turn on the light before, or as they enter an unlit area.
- Adjust lighting to your actual needs; use free “daylighting.”
- To prevent glare, eyestrain, and headaches, do not “over-light.” Too much light can be as bad for visual quality as too little light – and it costs a lot more.

EPA Sure Energy Savers

Lighting (Part 3)

- Install ENERGY STAR qualified exit signs. These exit signs can dramatically reduce maintenance by eliminating lamp replacement and can save \$10 dollars per sign annually in electricity costs while preventing up to 500 pounds of greenhouse gas emissions.
- Consider upgrading from older T12 (1.5" diameter) tubes with magnetic ballasts to more efficient T8 (1" diameter) fluorescent lamp tubes with solid-state electronic ballasts.

EPA Sure Energy Savers

Heating and Air Conditioning (Part 1)

- “Tune-up” your heating, ventilating and air-conditioning (HVAC) system with an annual maintenance contract. Even a new ENERGY STAR qualified HVAC system, like a new car, will decline in performance without regular maintenance.
- A contract automatically ensures that your HVAC contractor will provide “pre-season” tune-ups before each cooling and heating season. Your chances of an emergency HVAC breakdown also become very remote with regular maintenance.

EPA Sure Energy Savers

Heating and Air Conditioning (Part 2)

- Regularly change (or clean if reusable) HVAC filters every month during peak cooling or heating season. New filters usually only cost a few dollars. Dirty filters cost more to use, overwork the equipment, and result in lower indoor air quality.
- Install an ENERGY STAR qualified programmable thermostat to automate your HVAC system. This solid-state, electronic device optimizes HVAC operation “24/7” based on your schedule, and can be “overridden” as needed for unscheduled events, so staff and visitors always enter a comfortable facility. This “smart thermostat” can turn on the HVAC a certain amount of time before arrival instead of heating or cooling unoccupied space.

EPA Sure Energy Savers

Heating and Air Conditioning (Part 3)

- Control direct sun through windows depending on the season and local climate. During cooling season, block direct heat gain from the sun shining through glass on the east and especially west sides of the facility. Depending on your facility, options such as “solar screens,” “solar films,” awnings, and vegetation can help. Over time, trees can attractively shade the facility, and help clean the air.
- Interior curtains or drapes can help, but it is best to prevent the summer heat from getting past the glass and inside. During heating season, with the sun low in the South, unobstructed southern windows can contribute solar heat gain during the day.

EPA Sure Energy Savers

Heating and Air Conditioning (Part 4)

- Keep exterior doors closed while running your HVAC. It sounds simple but it will help to avoid wasteful loss of heated or cooled air.
- Use fans when a room/area is occupied. Comfort is a function of temperature, humidity, and air movement. Moving air can make a somewhat higher temperature and/or humidity feel comfortable. Fans can help delay or reduce the need for air conditioning, and a temperature setting of as much as 3 to 5 degrees higher can feel just as comfortable with fans, and each degree of higher temperature can save about 3% on cooling costs.

EPA Sure Energy Savers

Heating and Air Conditioning (Part 5)

- When the temperature outside is more comfortable than inside, a “box fan” in the window, or large “whole facility” fan in the attic, can push air out of the facility and pull in comfortable outside air. Fans can improve comfort and save energy year round.
- Plug leaks with weather stripping and caulking. This will help prevent the escape of heated or cooled air from your facility.
- Caulking and weather stripping also let you manage your ventilation, which is the deliberate controlled exchange of stuffy inside air for fresher outdoor air.

EPA Sure Energy Savers

Office Equipment

- Always buy ENERGY STAR qualified products for your facility.
- The ENERGY STAR mark indicates the most efficient:
 - computers
 - printers
 - copiers
 - televisions
 - windows
 - thermostats
 - ceiling fans
 - other appliances and equipment

EPA Sure Energy Savers

Water – Hot and Cold (Part 1)

- Fix leaks. Small leaks add up to many gallons of water and dollars wasted each month. Water conservation saves energy and money, especially when it is hot water.
- Use water-saving faucets, showerheads, toilets and urinals to save water.
- Install an insulation blanket on water heaters seven years of age or older, and insulate the first 3 feet of the heated water “out” pipe on both old and new units.

EPA Sure Energy Savers

Water – Hot and Cold (Part 2)

- If buying a new water heater, always buy the most efficient model possible. In areas of infrequent water use, consider “tankless” water heaters to reduce “standby” storage costs and waste.
- Set water temperature only as hot as needed (110-120 degrees) to prevent scalds and save energy (check local codes for specific temperatures).
- When landscaping, practice green landscaping (greenscaping or xeriscaping) to preserve natural resources and prevent waste and pollution by using plants native to your climate that require minimal watering and possess better pest resistance. Consider diverting “gray water” for irrigation rather than using fresh water.

EPA Sure Energy Savers

Kitchen and Food Service Equipment (Part 1)

- Purchase ENERGY STAR qualified commercial food service equipment.
- For example, qualified refrigerators and freezers are on average 35% more energy efficient than standard models, which equals up to \$170 annually for refrigerators and \$120 for freezers; deep fryers can save between \$80 and \$600 per year; hot food holding cabinets can save an average of \$430 per year; and steam cookers can save nearly \$550 per year depending on fuel.

EPA Sure Energy Savers

Kitchen and Food Service Equipment (Part 2)

- For existing refrigerators, clean refrigerator coils twice a year and replace door gaskets if a dollar bill easily slips out when closed between the door's seals.
- Have large and walk-in refrigeration systems serviced at least annually. This includes cleaning, refrigerant top off, lubrication of moving parts, and adjustment of belts. This will help ensure efficient operation and longer equipment life.
- Consider retrofitting existing refrigerators and display cases with anti-sweat door heater controls, and variable speed evaporator fan motors and controls.

EPA Sure Energy Savers

Plan > Design >
Implement > Verify

- Use a **tiered approach** to identify easy, low cost/no cost, short payback measures, medium cost/medium payback measures and higher cost/longer payback measures, with potential energy savings by tier as described. Tier components are **Plan, Design, Implement and Verify**.
 - **Tier 1** - 4-6 months Low cost/no cost improvements with pay back less than one year – projected potential Tier 1 savings 5% - 10%
 - **Tier 2** – 1 year +, medium cost improvements with pay backs of one to two years - potential Tier 2 savings with Tier 1 savings
 - **Tier 3** – 2 years +, higher cost improvements with paybacks over 2 years
- Note that savings in each Tier can be used as initial funding for improvements in the tiers. All tiers actually occur in parallel, but the planning-design-implementation-validation takes longer for more complex tiers.

EPA Sure Energy Savers

Recommended Tips

- Planning and Design through Local First Arizona SCALE UP workshops and working with ENERGY STAR Certified Contractors and ESCOs (Energy Service Companies). Implementing with the goal to save money through reducing energy usage aligned with sustainability goals related to tiered upgrades. Establish preliminary Tier 2 and Tier 3 strategies while rolling in Tier 1 savings and strategies.
- Develop and sustain a Green Team to help with sustainable planning for the future. Remember: Organizational behavior changes can account for an initial savings of at least 10%.
- Verify progress by using tools such as ENERGY STAR Portfolio Manager to track your utility costs and savings. Remember that visibility of progress can only be achieved through tracking bills.
- Consider soliciting bids for integrated systems building audit, including ESCO contract bids, and utilizing rebates.

EPA ENERGY STAR Benchmarking

EPA ENERGY STAR
Portfolio Manager

Benchmarking means to compare energy (including fleet), water, and waste generation to “something similar” to gain perspective about building performance.

Benchmarking Benefits:

- Assess whole building energy and water consumption
- Track green power purchases
- Share/report data with others
- Track changes in energy, water, greenhouse gas emissions, and cost over time
- Create custom reports
- Apply for ENERGY STAR certification

EPA ENERGY STAR Benchmarking

EPA ENERGY STAR
Portfolio Manager

- The first step in changing the way you use energy, water, and waste in the future is understanding how much you use today
- Learn where, how, and how much is used
- Save operational costs
- Water-energy nexus
- Competitive advantage in green marketplace
- Show sustainability leadership in the community



EPA ENERGY STAR Buildings

EPA ENERGY STAR
Portfolio Manager

- More efficient than 75% of similar buildings
- 35% less energy (on average)
- 35% fewer greenhouse gas emissions (on average)
- Higher income and increased rental value
- Higher employee satisfaction



EPA ENERGY STAR

First Step: Commit
to Continuous
Improvement

1.) Determine scope – Identify organizational and time parameters for goals.

2.) Estimate potential for improvement – Review baselines, benchmark to determine the potential and order of upgrades, and conduct technical assessments and audits.

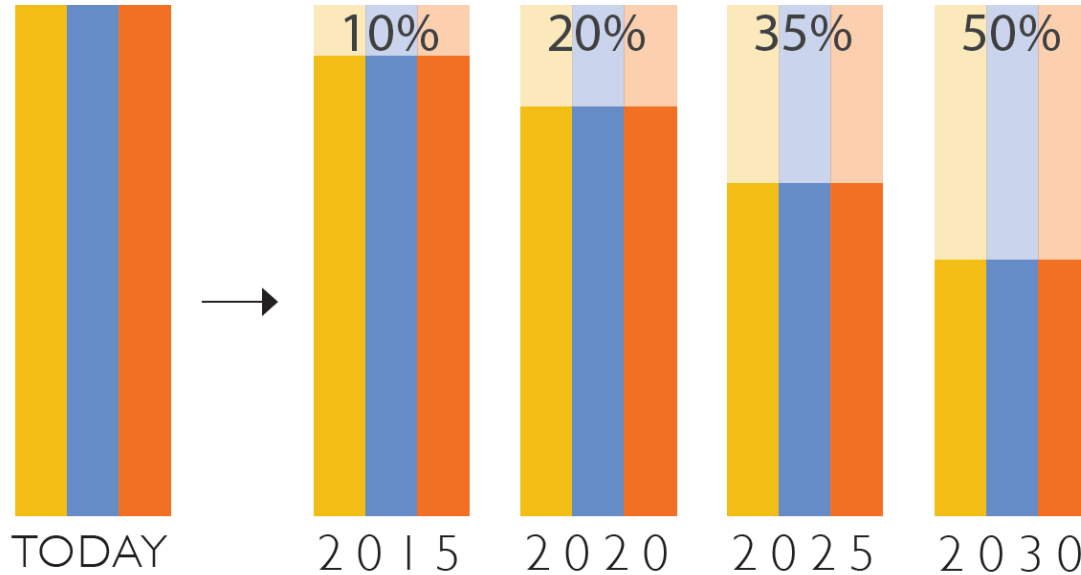
3.) Establish goals - Create and express clear, measurable goals with target dates for the entire organization, facilities, and other units.

- *No-cost actions can be leveraged to pay for low-cost upgrades which pay for higher cost upgrades for larger savings. You can't manage what you don't measure*
- *Efficiency first – before buying HVAC, solar, or boiler equipment to reduce waste to “right-size” new equipment and protect its ROI*

Performance Targets



The 2030 Challenge for Planning - Existing Buildings



- Energy, Water, and CO2 from Transportation Reduction
- Energy, Water, and CO2 from Transportation Consumption

The 2030 Challenge for Planning: Existing Buildings

Source: © 2011 | 2030, Inc. / Architecture 2030. All Rights Reserved.

Local First Arizona Sustainability Programs

Local First Arizona's sustainability programs focus on both businesses and the community, helping local business prepare for the future by finding solutions to lessen their impact and empowering citizens to play a role in making Arizona a resilient state.

- Arizona Green Business Program
- SCALE UP Program
- Southern Arizona Green Leaders
- Sustainability Campaigns



LFA Green Business Certification Program

Develop an understanding of the various high-impact actions a business can take for a plan through certification.

Arizona Green Business Program in Tempe, Phoenix, and Mesa



Arizona Green Business Program

A custom toolkit full of best practices and ideas that can positively affect your bottom line, focusing on energy consumption, water conservation, waste diversion, pollution prevention, transportation emissions and stormwater and wastewater.



Arizona Green Business Program Benefits

- Listing on the online directory and mobile app
- Certificate to display in your business
- Digital seal to post on marketing materials
- Customized sustainability plan showing best practices and recommendations on how to improve
- Assistance from LFA Green Team to achieve your sustainability goals
- Recognition in LFA marketing and press releases
- Save money with less wasteful processes
- Recognition as a sustainability leader in our community
- Grow loyalty with customers and employees that are seeking out environmentally friendly businesses



SCALE UP

SCALE UP is a comprehensive virtual seven-week workshop series on sustainable project planning offered through Local First Arizona. Available to independent businesses in Arizona, it offers the **unique opportunity to go from sustainability education and collaboration to project planning, financing, and implementation — all in one accessible package.**



SCALE UP

Sustainable Communities Accessing Lending & Education Upon Performance

SCALE UP

- Arizona focused program focused on environmental sustainability project planning for cost savings and community impact.
- A 7-week workshop series for business resiliency, climate action, and community benefits.
- Essential strategies for energy, water, waste, transportation, green teams, and social impact for sustainability that enhance customer and employee engagement.

Program Focus



Why SCALE UP

Greater
Sustainability
Project Impact

1. **LEARN** about sustainability, tracking and actions they can take as a business
2. **COLLABORATE** and network with other like-minded businesses
3. **PLAN** for specific sustainability projects that have an equity component and, in many cases, also save money
4. **FINANCE** projects if needed through our low-interest revolving loan fund
5. **IMPLEMENT** projects, get recognition and gain extra benefits for showing a successful reduction in energy, water, waste and/or transportation emissions
6. **GET RECOGNIZED** for your efforts through social media promotions and recommendations
7. **REBUILD** with an emphasis on equity and sustainability, attracting customers and engaging employees.

SCALE UP Focus Areas

Go Further with Sustainability Goals and Plans

- SCALE UP project(s) must lead to a projected 20% reduction in energy use, water consumption, waste generation, and/or transportation emissions.
- Each project must have a “social” component, ensuring equity, resiliency, and communication are incorporated into the plan.



SCALE UP

*Sustainable Communities Accessing Lending &
Education Upon Performance*

SCALE UP – Determine Your Why

- What makes this project a top priority?
- How does this project fit into the larger context of greenhouse gas emissions reduction?
- What are larger business and community needs?



SCALE UP – Participant Goals

- Develop Sustainability Concepts for Your Business
- Prioritize Equity, Resiliency and Community Engagement
- Learn from Sustainability Successes to Date and Go Further
- Save Money
- Attract Customers
- Retain good employees
- Build a stronger and more resilient state



SCALE UP – Financial Tools

- Cost-benefit analysis from the ROI and Payback Analysis Sheet
- AZ Rebates Sheet
- Loan Options
 - Local credit unions and community banks
 - SCALE UP Green Community Fund



Structure

Week 1: Orientation to SCALE UP

- what is scale up
- benchmarking training
- environmental justice
- resiliency & disaster planning

Week 2: Water

- water efficiency
- sustainable landscaping

Week 3: Energy

- renewable energy
- building efficiency

Week 4: Waste

- waste management
- zero waste practices
- sustainable procurement

Week 5: Transportation

- electric vehicles
- alternative transportation

Week 6: Culture of Sustainability

- green team & employee engagement
- policy & communication

Week 7: Sustainability Presentations

- group presentations
- recap of everything learned
- how all sections work together

SCALE UP – Case Study 1

With the knowledge from SCALE UP, Delectables Catering and Venue completed the following actions:

- Installed 3M NV15 window film to reduce heat and glare
- Increased inspection and maintenance of property to catch leaks and maintain efficient function
- Replaced numerous fixtures and appliances to increase facility efficiency

The benefits of these actions include:

- Reduced heat generated and cooling needed to maintain a comfortable space
- Reduced utility costs, particularly water and energy
- Greater awareness of property needs and common areas requiring repair

Now, their next steps include:

- Educating future tenants about sustainability practices
- Replace remaining kitchen light fixtures as needed
- Continuing to participate in TEP's solar shares program



SCALE UP – Case Study 2

With the knowledge from SCALE UP, Wholesum Harvest completed the following actions:

- Reduced air leaks through windows, doors, and walls
- Replaced two greenhouse swamp coolers with models that are 46% more efficient
- Installed more efficient toilets and acquired six sink aerators to save 16,000 gallons/month on water, as well as building shade
- Replaced air handling units in a greenhouse for 20% energy savings

The benefits of these actions include:

- Reduced energy needs as a result of fewer leaks and more efficient fans
- Reduced water needs from upgrading of restroom facilities and installation of sink aerators

Now, their next steps include:

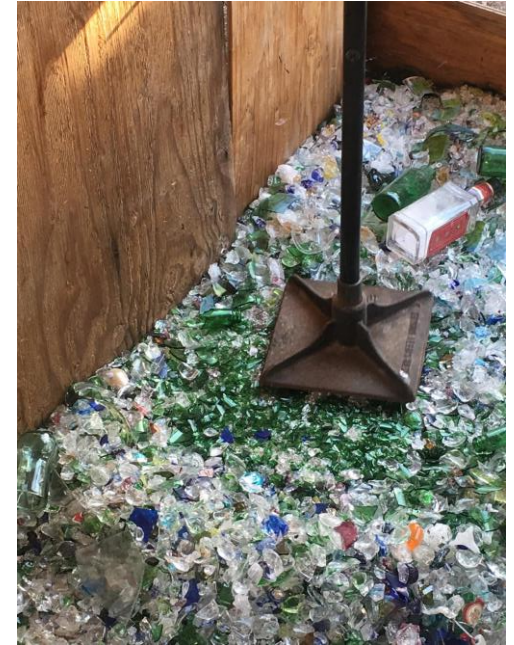
- Continued improvement of reducing heating and cooling needs by reducing air leaks and adding shade
- Evaluate fleet management and find opportunities to reduce fuel costs and emissions



SCALE UP – Case Study 3

Sonoran Glass School was looking for a way to recycle their furnace glass blowing shop's glass waste.

Through SCALE UP, they connected to Bottle Rocket, and put 100 lbs. a week of glass “waste” to use in concrete products including counter tops, planters, candles, and pet bowls.





**LOCAL FIRST
ARIZONA**
COMMUNITY KITCHEN



SUSTAINABLE
TUCSON



**NATURAL
BUILDING
WORKS**
A DIVISION OF MAY COMPANY

Project Greenhouse

Sustainable living in downtown Tucson



Imago Dei
Middle School

2020



ITKI FOUNDATION
International - Traditional - Knowledge
Institute - Foundation



BRINK®

**good
eye**



SCALE UP

- COHORT 1 -



COHORT 2





SCALE UP

COHORT 3



SCALE UP Project In Progress: Harris Fletcher Enterprises

- Harris Fletcher Enterprises is building an affordable housing project for refugees and veterans. Their goal is for this building to be a model sustainability project emphasizing natural building methods, including embodied carbon. The owners are disabled vets who experienced long-term poverty as children; now they are creating solutions for those experiencing financial, housing, and food insecurities.
- The goal of this project is to provide sustainable low-income housing, and they wanted to learn more about how to do that through SCALE UP and be a community model. They plan to only use ENERGY STAR and WaterSense appliances and plant edible fruit trees to create an urban food forest. This will result in a projected 25-50% energy savings, which is also a significant cost savings. They also plan to plant edible fruit trees to create an urban forest and reduce the heat index.



Local First Arizona – Contact Information

Michael Peel

Statewide Sustainability Director

Local First Arizona

mike@localfirstaz.com

www.localfirstaz.com