The Guide’s icons represent exemplars of sustainability in the natural world. As basic sustainability principles for the built environment have their roots in the planet and animal kingdoms, these icons are used to remind us of sustainability’s connection to environmental stewardship.

The olive branch, a symbol of peace and prosperity in classical myth, also exemplifies the benefits of tending natural resources. An olive branch can be offered as a diplomatic act of good will; an olive tree that is nurtured can thrive and bear fruit for a thousand years.
The new U.S. Embassy Sofia was the first U.S. diplomatic mission to receive Leadership in Energy and Environmental Design (LEED®) certification, in 2007. The Department now has 20 diplomatic facilities certified and another 32 registered.
USING THIS GUIDE

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The Guide to Green Embassies (the Guide) is a tool to support embassy and consulate personnel in achieving sustainable goals for buildings, grounds, and operations. By adopting the best practices detailed in the Guide, missions build stronger foundations for eco-diplomacy through demonstrating America’s commitment to environmental stewardship in ways that are tangible to host country visitors, citizens, and leaders. Sustainability is also an ideal way to highlight American ingenuity and leadership in cleantech, energy efficiency, renewable energy, and high-performance, sustainable solutions.

The Guide provides guidance and defines strategies for Chiefs of Mission (COMs), post management staff, and post green champions—formally organized into Post Green Teams or not—to improve and manage facilities in safer, more secure, functional, efficient, reliable, and sustainable ways. By implementing these guidelines, post staff can contribute to the Department’s progress in achieving federal performance goals; in building awareness, knowledge, and skill capacity overseas; and in strengthening our missions as platforms for eco-diplomacy.

The many federal performance goals and Department directives guiding our sustainability objectives can create a complex regulatory environment. To assist posts in understanding how internal and external directives combine and align common goals, the Guide is organized into six chapters based on environmental impact categories: Transportation, Site, Water, Energy, Materials, and Indoor Environment. An additional chapter, Residential, includes specific applications related to impact areas at home. Together, these focus areas create a roadmap that identifies policies, best practices, and specific strategies to implement. Further, by organizing chapters into these categories, the Guide focuses on performance outcomes, creating a vision for a preferred future that allows posts to capitalize upon opportunities presented by federal reduction targets and to proactively create change.

The chapters seek to answer the following questions, many of which address challenges that posts face regularly:

- **Transportation:** How can posts manage fleets, air travel, and transportation options to reduce greenhouse gas (GHG) emissions?
• **Site:** What options exist for posts to manage, improve, and demonstrate sustainable landscape and irrigation practices to enhance biodiversity?

• **Water:** How can posts reduce annual water consumption and costs while managing stormwater to protect water resources?

• **Energy:** How can posts reduce annual energy consumption and costs, decrease reliance on fossil fuels, and increase use of renewable sources of energy?

• **Materials:** What options exist for posts to reduce procurement impacts, reduce waste, and support local and regional business?

• **Indoor Environment:** How can posts enhance and maintain healthy and productive work environments for their occupants?

• **Residential:** What are the unique opportunities for posts to manage and implement changes at residential facilities that address the same impact areas identified in the *Guide* for non-residential facilities?

Additionally, significant guidance has been added to this chapter and within each chapter to assist post management and green champions with occupant behavior and staff engagement strategies.

### Chapter Introductions

Each chapter begins with federal performance goals that specifically address the chapter’s environmental impact area. The chapter then identifies and provides global context for factors and agents driving change in its unique impact area. A Profile section provides information about how these drivers influence the built environment, and describes how the topic can be divided into smaller pieces that can more easily be addressed. These pieces can then be used to identify how management modifications, improvement upgrades, renovations, and behavior changes can help posts, the Bureau of Overseas Buildings Operations (OBO), and the Department achieve higher performance.

Though not all strategies contained in the *Guide* may be addressable or immediately applicable at all posts, the goal is to facilitate the implementation of as many strategies as possible. Thus, Chapters are individually tabbed and designed to provide consistent information for ease of use.
the second half of each chapter introduction proposes both a preferred approach to identifying and prioritizing strategies as well as a description of special considerations that may influence post’s planning and management decisions. Additionally, the chapter highlights anticipated benefit from strategy implementation. The Practical Application section helps posts account for their unique cultures, regional climate conditions, and specific development patterns, as well as the age, size, and systems of their facilities.

**Strategies**

The majority of chapter content is devoted to specific strategies. Although each impact area chapter’s list of strategies varies, these chapters begin with an ‘Audit’ strategy and conclude with a strategy entitled ‘Staff Engagement.’

**A general explanation of different strategy types follows:**

- **Audit strategies:** The first step in identifying the best sustainability investment plan is an objective evaluation and benchmarking of existing conditions. Conducting an audit is a high priority; having the facts about existing conditions helps identify the combination of impact-area-specific strategies that best assists posts in reaching and documenting progress toward desired goals.

- **Impact-area-specific strategies:** Each chapter of the Guide includes strategies specific to the chapter’s impact area. While the Guide does not provide an exhaustive list, the range of strategies included allows most posts to identify one or more high-value strategies that can be successfully implemented.

- **Strategy-specific case studies:** Case studies in each chapter demonstrate the potential of specific strategies by describing examples of successful implementation. Strategy-specific case studies are located immediately after the strategies to which they apply, enabling comparison between the two.

- **Staff Engagement strategies:** The last strategy in each chapter is entitled Staff Engagement. This strategy is a compilation of key occupant behaviors that can improve performance at little or no cost, along with practical applications that post management and green champions can use to implement engagement programs. General information about facilitating behavior change is provided later in this chapter.

Regardless of type—audit, impact area-specific, or staff engagement—the strategies are designed to provide information in a standardized format for ease of use and comparison. That format is as follows:

Each strategy begins with a matrix, describing in both text and icons information on benefit, time, investment, and required team members. The
matrix should be used initially to identify strategies warranting further review, to provide estimates for typical implementation, and to serve as a starting point for post discussions. The actual level of benefit received from, or actual time or cost invested in, implementation of a strategy can vary based upon site-specific factors.

- **Benefit**: Each strategy in the *Guide* can provide multiple benefits, which are summarized in the matrix. Most of these include some type of operational savings (e.g., energy, water, operating expenses), while others can benefit building occupants (e.g., improved air quality, natural light, ergonomics, or biophilia) or the greater environment of the host country (e.g., eco-diplomacy efforts to be a good neighbor).
  - ★ ★ ★ ★ Modest benefit
  - ★ ★ ★ Medium benefit
  - ★ ★ ★ ★ Significant benefit
  - ★ ★ ★ ★ ★ Major benefit

- **Time**: Each strategy identified in the *Guide* takes time to conceive, plan, implement, and measure. While unique post conditions affect the time it takes to complete and generate benefit from the strategy, the following guidelines have been provided based on prior post experiences with similar project implementation. The following scale is used to define the estimated time required. When a strategy includes a range of potential time frames, the icon represents the lower end of the range.
  - 🕒 ☀ ☀ ☀ One month or less
  - 🕒 ☀ ☀ ☀ Six months or less
  - 🕒 ☀ ☀ ☀ 18 months or less
  - 🕒 ☀ ☀ ☀ More than 18 months

- **Investment**: The absolute cost of implementing a strategy varies depending on the size of the system or upgrade, the size of facility, and the type of technology selected, among other factors. To assist posts in identifying typical costs associated with the strategy (beyond the labor cost of staff time), the following scale is used to define the estimated investment:
  - $ $ $ Little or no funding required
  - $ $ $ Funding from annual operations budget
  - $ $ $ Funded through special funding allotment
  - $ $ $ $ Significant level of funding required
• **Team Members:** Within strategy matrices, the first member listed—in bold—is typically best suited to lead the strategy. Those who follow need to be informed, consulted, or engaged.

The list below defines acronyms for potential team members necessary to ensure optimal implementation for each strategy, but is by no means comprehensive or indicative of everyone involved.

- Bureau of Overseas Buildings Operations (OBO)
- Chief of Mission (COM)
- Commissioning (Cx) Agent
- Community Liaison Office/Officer (CLO)
- Energy and Sustainable Design Unit (ESD or OBO Green Team)
- Facility Management/Manager (FM)
- Financial Management Office/Officer (FMO)
- General Services Office/Officer (GSO)
- Human Resources (HR)
- Information Management Office/Officer (IMO)
- Management Office/Officer (MO)
- Planning and Real Estate (PRE)
- Post Occupational Health and Safety Officer (POSHO)
- Public Affairs Office/Officer (PAO)
- Regional Security Office/Officer (RSO)
- Safety, Health, and Environmental Management (SHEM)
- Test and Balance (TAB) Contractor

Following this matrix is a brief context overview for the strategy that outlines why the strategy is worth pursuing and how it can factor into a larger sustainability picture.

**Additional Resources**

At the end of the chapter are directions to additional resources and web links that offer more detailed information. These resources, noted by book icons (Resources), appear throughout the *Guide* to indicate the existence of additional resources on specific topics. Readers can access these resources by visiting [http://www.state.gov/obo/green/greenguiderefs/index.htm](http://www.state.gov/obo/green/greenguiderefs/index.htm). Online readers may also click on the link located in the Resources section at the end of each impact area chapter.
Case Study: Awards Program

Ulaanbaatar, Mongolia

The Greening Diplomacy Initiative (GDI) Award was created by the Greening Council in an effort to strengthen the Department’s sustainability efforts. The Department’s personnel were encouraged to submit success stories on the GDI Success Stories website. Winners were chosen based on outstanding success stories that aligned with GDI Guiding Principles objectives and the Department’s Agency Sustainability Plan.

Criteria included:

- Reduces the Department’s environmental footprint
- Increases the use of environmentally preferred products
- Illustrates office or post greening collaboration with host nations
- Is transferable to other offices, or posts, or nations
- Has been integrated into the Department’s training efforts

In 2010, U.S. Embassy Ulaanbaatar won the first ever GDI award for the following achievements:

- Carbon footprint calculation—first U.S. embassy
- Formation of Green Team in the Embassy—including LES staff
- Weekly green tips—in the community newsletter
- Water conservation—well drilling, resulting in 16.94% savings in water bills
- Recycling—resulting in 22% savings in trash expenses and 110 cell phones donated to Cell Phones for Soldiers Phone Card program
- Electrical improvements—switch to compact fluorescent lamps (CFLs) and rewiring to smaller grids, resulting in 33.74% energy savings
- Environmentally safe cleaning products—switch to environmentally friendly products

U.S. Deputy Secretary of Energy Poneman speaks about ‘Building a Sustainable Energy Future’ in Mongolia

Image Source: U.S. Embassy Ulaanbaatar
Organizing for Sustainability

Post Green Teams

Forming Post Green Teams or harnessing the enthusiasm of individual green champions is an effective way to implement sustainability strategies that require input, coordination, and dedication from stakeholders with a broad range of expertise and backgrounds. Sustainable operations require team efforts by committed groups of informed and engaged internal staff with holistic visions and concrete goals, who identify and implement appropriate projects, practices, and policies. An effective, inclusive approach helps ensure that everyone is working toward the same goals, and allows personnel across multiple offices to share the responsibilities.

Following is a list of suggested steps that posts can take to form successful Green Teams. Consult OBO’s Green Team Toolkit for additional resources.

1. **Gain upper management endorsement and support.**

   The Introduction to the *Guide* includes five steps that COMs can follow to begin the journey toward eco-diplomacy. Note that step two is “Ensure that a Green Team is organized and empowered to lead.”

   As volunteer team members may be operating outside of their professional roles and responsibilities, obtaining upper management’s
endorsement and support is especially important for successful Post Green Teams. Teams who receive endorsement and support gain authority that they otherwise may not have: to meet, to establish team goals, to gather and disseminate information, and to make recommendations about implementation of policies and practices.

2. Identify leaders.

A Post Green Team’s success depends in large part upon the credibility and effectiveness of its leadership and the degree to which leaders can engender support for the team’s initiatives.

**Leadership responsibilities may include the following:**

- Organizing, convening, and leading regular team meetings
- Encouraging subject matter experts, representatives, and partners to remain engaged as they balance demands of their official work responsibilities
- Building and leveraging relationships with key stakeholders throughout the mission and with other Department and external entities in order to build momentum
- Leading Post Green Team interactions with staff, sections, team members, and management; coordinating with OBO’s ESD; and raising awareness about the Department’s platform of eco-diplomacy
- Managing and measuring overall progress and results of Post Green Team initiatives and reporting successes and challenges to leadership

3. Identify other team members and partners.

The results of Post Green Teams also depend upon the enthusiasm and knowledge of their members, as well as the breadth and depth of their reach. Ideally, Post Green Team members represent as wide a variety of post sections and offices as possible, and bring expertise in subject matter related to one or more of the impact areas in the Guide. It is important that members bring enthusiasm, that they understand the necessity of the team’s success, and that they are willing to dedicate time and effort to performing their roles and to producing results.

Just as with the team leadership, Post Green Team members typically embody a personal commitment to sustainability values aligned with the Department’s Greening Council and the established guiding principles of eco-diplomacy as represented by the Department’s GDI. Post Green Team members model this personal commitment through their daily behavior.
A member’s responsibilities may include the following:

- Making and keeping commitments to fellow Post Green Team members to model sustainability by consistently demonstrating sustainable actions
- Sharing ideas for strategies to meet Post Green Team goals
- Identifying achievements, opportunities, and challenges within team member’s own sections or offices, and sharing this information with the Post Green Team
- Implementing strategies specifically related to their subject matter expertise in support of federal performance goals

4. Form the team.

Once Post Green Team leadership, team members, and partners have been identified, the team can meet to establish their group norms and roles. These may include:

- Establishing a team purpose by defining the Green Team’s primary goal, mission statement, and guiding principles; and ensuring that the mission statement is post-specific and well aligned with the Department’s mission statement, as well as with host country challenges and opportunities
- Defining the team structures by identifying specific team member roles and responsibilities
- Establishing the team process by defining meeting times, meeting agenda standards, creating standards for communicating with other group members between meetings, and setting standards for the creation and distribution of meeting minutes

5. Continue building the team.

In addition to holding regularly scheduled meetings, Post Green Teams can benefit from conducting wider annual meetings to invigorate their visions, revisit their mission statements, reestablish team goals for the upcoming year, and revisit existing strategies. These meetings should be
open to broader groups of interested staff to educate, build awareness, and engage staff. During these meetings, it may be determined that some goals and strategies should be replaced, while others—such as ongoing energy efficiency training during orientation—should remain indefinitely.

**Keys to Post Green Team Success**

There are several best management practices that can help Post Green Teams manage expectations of mission leaders, inspire post personnel, advocate change, and contribute to success.

**Following are the key actions to success gleaned from experienced Post Green Teams:**

1. **Gain knowledge of post’s context.**

   Post Green Teams should be aware of, and understand as well as possible, the contexts within which they operate. The quality of the information maintained by the team can determine the level of certainty with which the teams can execute change.

   In order to better understand system characteristics—including existing conditions; geographic context; climate; and financial, time, and policies constraints—Post Green Teams can undertake the following tasks:

   - Conduct audits for each of the Guide’s impact areas.
   - Discuss audit results as a team.
   - Identify areas of special interest and priority to post, such as local climates, resource availability, and resource costs.
   - Identify Post Green Team and post constraints, such as budgets and key team member availability to contribute and complete strategies. Include short-, mid-, and long-term constraints.

2. **Select meaningful strategies.**

   There is no one-size-fits-all approach to achieving

   **Some potential questions to ask during the goal selection process**

   - Does the goal align with GDI’s Guiding Principles and the environmental imperatives of the host country?
   - Can achieving this goal help demonstrate eco-diplomacy?
   - Does the goal contain a specific impact area, performance target, deadline, and link to federal performance goals?
   - Is the goal measurable, so that staff can monitor, manage, and report their progress?
   - Is the goal realistic, so that team members and partners can see their own success striving to reach it?
performance improvements at posts. Some posts may have significant impacts related to energy and water consumption, while other posts’ biggest impacts may be related to their transportation profiles. Posts should use the Guide to identify their top two or three impact areas and focus on those areas first to gain momentum and success. To bring focus to those top-priority impact areas, Post Green Teams should begin with audit and staff engagement strategies; doing so can give teams greater understanding of the issues related to those topics and help them begin to shift occupant behavior toward achieving federal performance goals.

Begin by reading the chapter introductions, using post’s unique characteristics to rank the chapters from most significant to least. Next, use the audit results and Priority Selection Criteria included in each chapter’s introduction to identify the two to three strategies within the highest ranked impact areas to implement. Consider which strategies can be implemented by the skills of Post Green Team members, and which can create operational savings with quick payback.

Although many potential strategies are included in the Guide, it does not provide an exhaustive list of strategies for meeting any goal. There are other possible strategies beyond what is written within. Seek unique opportunities to motivate others and produce results.

3. Develop an implementation plan.

Strategies provided in the Guide do not provide all the information that Post Green Teams need to create an implementation plan; however, teams can use the Investment and Time metrics contained within each strategy as starting points for discussion. In the implementation plan, Post Green Teams should identify which strategies can be executed in the short term so that the team can begin to develop patterns of success. Include, too, strategies that span multiple years and achieve significant benefit.

While various levels of detail are possible, at a minimum, plans should:

- Record the goals and targets.
- Establish current baselines for performance to measure against progress and success.
- Document the selected strategies and how they reinforce established goals. Use worksheet planning tools to document the planning processes.
- Document and verify progress, success, and barriers to implementation. See Figure 2 for an example of how Post Green Teams might document their plan.
• Incorporate lessons learned and modify the plan accordingly.

4. **Implement, measure, and communicate results.**

Successful implementation, good project management, measurement and reporting of progress, and tracking progress against project goals are activities that are critical to a Post Green Team’s success.

**Some activities unique to Post Green Teams include the following:**

• Start a Post Green Team webpage. Websites can be an excellent way to share success stories, gain feedback, and raise awareness. U.S. Embassy Beijing notes on its website (see: [http://beijing.usembassy-china.org.cn](http://beijing.usembassy-china.org.cn)) China’s National Sustainable Development Outline principles and plans as well as current events, reports, and announcements. Other countries use their embassy websites to communicate commitment to sustainability, including the embassies of Chile, Sweden, Australia, Switzerland, Austria, and Denmark, all of which state their environmental laws and recommendations for green activities by organizations and citizens. U.S. Embassy Madrid includes its ‘Strategic Plan for Climate Change Science Program,’ while U.S. Embassy highlights posts green policies of its host country.

• Connect with other Post Green Teams. The strategies contained within the *Guide* are a compilation of those that have been successfully implemented at posts around the world. Consider documenting your experiences in implementing strategies—perhaps using a format similar to the one used in the *Guide*—and sharing information with posts in neighboring countries. Membership in the League of Green Embassies is one of the best ways to benefit from and contribute to the sharing of greening successes.

• Apply for awards. The Department offers several ways to gain recognition for performance improvements and sustainability policies and programs that help achieve federal performance goals. GDI offers posts the opportunity to share their successes via an interactive, web-enabled map of Greening Success Stories. Annual GDI awards celebrate leaders around the globe who successfully implement sustainability initiatives. (see: [http://www.state.gov/m/pri/gdi](http://www.state.gov/m/pri/gdi))
**Figure 2: Sample planning worksheet**

**Green Team Planning Worksheet**

<table>
<thead>
<tr>
<th>Year: 2013</th>
<th>Post: New Delhi, India</th>
</tr>
</thead>
</table>

**Goals**

Refer to the *Guide* Introduction to identify federal performance goals that can be adopted by post. Consider your host country to identify environmental goals and requirements that are unique to your post and that may further the Department’s platform of eco-diplomacy.

1. Reduce energy intensity by 30% by 2015 using 2007 baseline.
2. Divert 50% of non-hazardous solid waste by 2015.
3. Reduce potable water consumption intensity by 26% by 2020 using 2007 baseline.
4. Reduce fleet fossil fuel consumption by 30% by 2020 using 2005 baseline.

<table>
<thead>
<tr>
<th>Goal</th>
<th>Strategies</th>
<th>Benefits</th>
<th>Investment</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Energy audit</td>
<td>N/A</td>
<td>$2,000</td>
<td>40 hrs</td>
</tr>
<tr>
<td>1</td>
<td>Re-commissioning (Re-Cx)/Retro-commissioning (Retro-Cx)</td>
<td>~10% less energy use</td>
<td>$6,000</td>
<td>120 hrs</td>
</tr>
<tr>
<td>1</td>
<td>Energy education</td>
<td>~10% less energy use</td>
<td>$1,000</td>
<td>20 hrs</td>
</tr>
<tr>
<td>2</td>
<td>Waste management</td>
<td>60% diverted</td>
<td>$2,500</td>
<td>50 hrs</td>
</tr>
<tr>
<td>3</td>
<td>Water audit</td>
<td>N/A</td>
<td>$2,000</td>
<td>40 hrs</td>
</tr>
<tr>
<td>3</td>
<td>Metering</td>
<td>N/A</td>
<td>$5,500</td>
<td>10 hrs</td>
</tr>
<tr>
<td>3</td>
<td>Efficient plumbing fixtures</td>
<td>~20% less water use</td>
<td>$20,000</td>
<td>10 hrs</td>
</tr>
<tr>
<td>3</td>
<td>Water education</td>
<td>~10% less water use</td>
<td>$1,000</td>
<td>20 hrs</td>
</tr>
<tr>
<td>4</td>
<td>Fleet management policy</td>
<td>~15% less fuel use</td>
<td>$15,000</td>
<td>100 hrs</td>
</tr>
<tr>
<td></td>
<td>Totals</td>
<td>See notes</td>
<td>$55,000</td>
<td>410 hrs</td>
</tr>
</tbody>
</table>

**Notes**

- Energy use reduced by ~20% (in kilowatt-hours (kWh)) over 2007.
- Hazardous solid waste (by weight) reduced by 12% over 2012 and 20% diverted.
- Potable water consumption reduced by 6% over 2007.
- Fleet fuel consumption reduced by 15% over 2005.
Influencing Occupant Behavior

Behavior Principles

Although people interact with buildings daily, many tend to identify sustainable facilities with physical features, such as alternative energy systems, water-efficient fixtures, or recycled carpet. The perceptions seem to be that:

• Building designers are responsible for building performance.
• Building performance is established primarily prior to occupancy.

These perceptions are inaccurate. Building design effectiveness and efficiency are largely influenced by, and dependent on, those who operate and occupy the building. In fact, building performance and a significant proportion of building resource use are driven directly by operational and occupant habits that are often completely independent of the building design. In many cases, these habits have a larger impact on building performance than does the initial building design.

Some aspects of building performance are controlled primarily by building operators, maintenance staff, or controls programmers. Other aspects are controlled primarily by building occupants, who are seldom in a position to recognize their direct impact on building performance.

For example, heating, ventilating, and air conditioning (HVAC) fan energy use is an element of building design, but its effectiveness and efficiency is limited by building operational habits (e.g., filter maintenance). Similarly, lighting controls are elements of building design, but occupant habits (e.g., turning lights off) determine effectiveness and efficiency. In some cases, such as with temperature setpoints, building design elements can be impacted both by operational and occupant habits (e.g., setting schedules and prohibiting individual space heaters and fans).

To maximize benefits from occupant behavior related to building performance, leadership is needed to foster change. Such leadership need not be formal; it can come from change agents and influencers throughout the organization.

Post Green Teams can make a major difference in the impact of U.S. operations on their host countries’ environments and local economies, as well as in the lives and health of embassy personnel. The Department is committed to supporting this change, and the Guide is designed to spark action.
Typically, a sustainability journey is a multi-disciplinary and interdepartmental effort involving psychology, observational and social research, marketing, communication, organization change, infrastructure design, and regulation. Such complex efforts require special leadership skills. The following pages are devoted to providing the means and methods to help sustainability leaders at all levels at post address these needs by guiding them through three stages of organization behavior change: personal, social, and structural.

Personal

It can be challenging to bring about lasting personal behavior change.

Following are strategies that leaders can use to strengthen their personal efforts to model sustainable behavior:

**Make a personal commitment.** Making and keeping sustainability commitments to oneself is the basis of making and keeping such commitments to others. The process of making a personal sustainability commitment includes some of the same steps that Post Green Team leaders, members, and partners take in establishing their team.

**U.S. Ambassador Jones taking the Green Pledge**

Steps to assist in making a personal commitment include:

1. **Clarify your personal purpose in pursuing a more sustainable life.**
   
   Ensure that your purpose is well-aligned with both the Department’s Agency Sustainability Plan and the Greening Council’s Charter and Guiding Principles.
2. **Understand your own sustainability values.**

Identify the perspective you bring to work and your community every day.

The following is a sample of questions that you can ask yourself to uncover your own motivations for change:

- How are your personal interests connected with environmental, social, and economic sustainability issues? For example, someone passionately interested in economic prosperity may want to obtain a deeper understanding of how saving resources equates to saving money. Those passionately interested in personal health may want to obtain a deeper understanding of how sustainable food systems, access to healthy outdoor environments, and clean air affects their personal health and those around them. Those who are concerned about social equity may want to obtain a deeper understanding of how climate change or water quality can impact resource conflicts and major populations.

- What is your personal sustainability impact? For example, you might want to calculate your personal carbon or water footprint (or both). You might also want to quantify the cost of personal expenses related to sustainability, such as home utilities or commuting costs, and note how these costs have changed over time.

3. **Set personal sustainability goals.**

Ensure that the goals align with your personal purpose and context. Use the information gathered in earlier steps to identify areas where your purpose, interests, and constraints can enable and motivate you to make a positive contribution in addressing big sustainability challenges.

**Change personal habits.** Other people cannot know our intentions; they can only interpret how we behave. In order to influence their colleagues, Post Green Team members must first model desired behavior. Using your personal commitment, identify some simple sustainability habits that you can easily adopt. Once you’ve mastered these new habits, identify new, more challenging habits. Create and build momentum and ultimately your mastery of personal behavior change can allow you to lead by example and inspire others to do the same.

**Gain knowledge.** The body of sustainability knowledge is expanding daily, so continuing sustainability education and knowing the facts are essential strategies for a sustainability leader and behavior change agent. This education may include information in one of two general topic areas: raising awareness and developing skills.
Following are some suggestions specifically related to sustainability education:

- Organize or participate in lunch-and-learn sessions at post. These could be designed to develop new technical skills for small groups of post staff or to raise awareness about new sustainability challenges for larger groups.

- Consider offering a variety of brief sustainability education sessions in conjunction with new employee orientation. These sessions could help new staff identify specific sustainability challenges and opportunities presented at post, as well as raise awareness about how they can help address them. Separate sessions could be offered to post staff families to help them adjust to local sustainability issues in their new homes.

- Take advantage of online professional education through organizations such as the International Facility Management Association (IFMA). Online training from reputable organizations is a high-quality and low-carbon alternative to classroom training.

- Encourage partnerships that support shared training, within security guidelines. Don’t overlook the value of training for suppliers and vendors, who may be interested in learning about such resources.

- Investigate formal education. Universities and colleges around the world are now offering courses remotely that address sustainability through social, environmental, and economic lenses. These resources can be valuable both for raising awareness and for skill development by all members of the post community.

According to Climate Outreach and Information Network: A Practitioners guide to the psychology of sustainable behavior, a person has to identify a goal (e.g. drive less), a behavior in pursuit of that goal (e.g. get the bus to work on Fridays) and the situation that will trigger the behavior (e.g. having enough time to catch the bus).

Social

The most effective change agents understand the power that human beings hold over one another. Adopting new behavior may feel inherently unsafe. The social stage of organizational behavior change involves using a fundamental understanding of human social behavior to facilitate a shift in group behavior toward sustainability.

Influence the influencers. Within any group, the praise, acceptance, and approval of some people are generally seen to be more valuable than that of others. These socially powerful people—the group’s thought leaders—are well-connected and well-respected.
Rather than focusing on transforming the behavior of everyone in the group directly (an ambitious goal), a sustainability and behavior change leader can focus instead on shifting the opinions and behaviors of social leaders. In fact, one of a sustainability champion’s most important roles is to facilitate strategic discussions that include these thought leaders.

Instead of asking, “How can I make post share my passionate concern for energy and water efficiency?”, a sustainability champion may want to consider asking, “How do we help our thought leaders solve the urgent problems they already face through a sustainability lens?”. A thought leader’s personal concerns may have strong ties to sustainability issues; finding those connections may enable sustainability champions to persuade the thought leader of the value of sustainability and of systems-based thinking. Thus, by acquiring a deep understanding of thought leaders and their real needs, and by addressing those needs with sustainability solutions, sustainability leaders may be able to leverage behavior shifts in entire groups.

**Shift social norms.** Social norms are group-held beliefs about how members should behave in a given context. These beliefs reflect a group’s deeply held shared values. Although green champions may have strong desires to change the world, most people prefer incremental improvement and strongly resist any change that is perceived to challenge their values.

Provided they have been able to gain the support of the group’s thought leaders, sustainability leaders may be successful in fostering widespread behavior change through any number of actions, including the following:

- **Raising awareness.** Make explicit the connection between sustainability and safer, more secure, functional, and efficient buildings. Experiment with informal outreach activities.

- **Being clear.** When implementing strategies that impact post staff, make sure to communicate goals to staff members affected by the change. Consider using a variety of communication tools, such as

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**Table 1: U.S. Consulate General Guangzhou staff behavior change commitments**

<table>
<thead>
<tr>
<th>I pledge to:</th>
<th>Number of pledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eat meat at most three days a week</td>
<td>548</td>
</tr>
<tr>
<td>Limit my showers to five minutes</td>
<td>330</td>
</tr>
<tr>
<td>Recycle all plastic bottles I use</td>
<td>825</td>
</tr>
<tr>
<td>Join an environmental organization</td>
<td>516</td>
</tr>
<tr>
<td>Plant a tree</td>
<td>631</td>
</tr>
<tr>
<td>Build a compost bin</td>
<td>132</td>
</tr>
<tr>
<td>Ride my bike to work every day</td>
<td>553</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>3,535</strong></td>
</tr>
</tbody>
</table>

Data Source: U.S. Consulate General Guangzhou
email, SharePoint sites, online newsletters, posters, fliers, internal print publications, and allowable social media such as Facebook and Twitter. When asking others to take action, provide the most simple, easiest instructions possible.

- **Soliciting feedback.** Use surveys to ask post staff about issues relevant to effective operations and their well-being. Ask for personal perspectives on how well specific sustainability challenges are being addressed, or how well teams are collaborating to solve complex, systemic challenges. Ask people to share what sustainability means to them and what they wish it would become. Do not neglect to follow through: lack of follow-through is a significant demotivating force. Examine the aggregated results, decide on a strategic response, and provide updates to those who offered feedback.

- **Demonstrating respect.** Listen with focused curiosity and interest. Ensure that your nonverbal and verbal communication reflects your willingness to better understand and to learn from others. Be on time for meetings, and allow ample time for others to share their thoughts so they have an opportunity to dig deep. Encourage people to find ways to connect sustainability to their personal goals.

- **Sharing success stories.** Stories are our best tools to communicate; the best stories are short, emotional, surprising, concrete, and believable. Success stories, and especially personal success stories, offer people an opportunity not only to connect with the storyteller, but also to gain new insights about how sustainability can benefit them personally.

- **Jumping on the bandwagon.** Provide opportunities for group members to participate in activities with their peers. Develop lists of global and local sustainability initiatives and special dates, such as Earth Day, and organize special activities around the theme. Organize group trips to neighboring green buildings or manufacturing facilities.

- **Asking questions.** Provocative and truly investigative inquiries can open minds and shift perspectives of others who control results and the keys to change.
• **Making it fun!** When possible, use humor, include refreshments, and create a casual atmosphere. Introduce game-like processes that enable small groups to engage in friendly competition with other, similar groups. Implement a ‘best idea of the month’ contest.

**Structural**

In discussing the structural component of influencing occupant behavior, we step away from human factors—personal and social—and focus on how to harness the power of non-human elements. Structural components support shifts in personal and group behavior. These include physical signals—what people touch, see, and otherwise perceive through their senses—as well as the formal and informal processes through which people work. Examples of structural components include policies, procedures, building technologies and systems controls, incentives, awards, and feedback mechanisms.

**Refine incentives.** Creating effective incentive programs can be challenging. Many well-intentioned programs inadvertently backfire. The most successful programs tend to be implemented after personal and social components have been addressed, for those who are already motivated to change and who already have the social support necessary to do so.

**Following are some guidelines for establishing sustainability incentive programs:**

• Ensure that incentives support staff in their personal context. Consider whether incentives encourage behavior that is already aligned with professional performance goals. If so, it may be valuable to document sustainability leadership and performance to support feedback during formal evaluation processes.

• Create incentives that support staff in their social context. Consider whether incentives dignify participants in the eyes of others or whether they have the potential to cause embarrassment.

• Set incentives that are valuable to their intended recipients, both to individuals and to their social groups. Consider recognizing outstanding sustainability leadership and performance with dignified, public praise. This may include physical awards and partnerships with local organizations within the host country. Possibilities for smaller incentives may include recognition at ‘all hands’ meetings or other ‘town hall’ type events. Details matter; the value of a certificate of recognition may depend upon the job title of the person whose signature appears on it.

• Consider implementing programs that provide rewards only if performance targets are met. Receiving valued rewards can be good motivators, but people may be more motivated by the potential loss of rewards.
Change the physical environment. For better or worse, much of our behavior is influenced by environmental forces. As a result, this resource, one of our most powerful sources of influence, is seldom engaged as an agent of change. Perhaps we more often identify goals, notice behavior that prevents us from achieving our goals, and focus on how to change people—the personal and social component—rather than their environment.

Thus, we may miss subtle opportunities. Sometimes the size or design of a chair can make a person more comfortable and, consequently, more productive or communicative. Sometimes the size of a room can make a person feel confined and less likely to continue working on a task. Similarly, a change in the physical environment where someone lives or works may cause them to behave in more sustainable ways. The powerful, and often undetected, influence of the physical environment presents good opportunity to shift occupant behavior. Things don’t resist change, and many of them are inexpensive.

Many physical adjustments are included in the chapter strategies.

Following are some additional suggestions for creating a physical environment that supports your goals:

- Ensure that the physical environment sends a message that aligns with your goals. For example, if one of your objectives is to encourage building occupants to provide more timely reports about building maintenance issues, then ensure that building maintenance staff are accessible to building occupants for feedback. One way to do this is by placing their office in a visible location. Another is to ensure that processes and technologies—such as email addresses—are in place to make communication easy and simple.

- Stage the physical environment to make sustainable behaviors easy and convenient for occupants. One way to do this is by setting appropriate defaults. For example, set occupancy sensors to turn the lights off, not on (when occupants need to turn the lights on, they can do so manually) or set toilets to flush less water.
when the handle is pushed down, the default direction, in a dual-flush toilet.

- Create a physical environment that invites opportunities for passive education and instruction. Provide cues to remind people of the behavior that you’re trying to influence. For example, install point-of-use signage, such as at hand-wash sinks, that provides information about how many liters (L) of water are consumed for every ten-second interval of use. Monitoring devices, such as those that keep continuous energy consumption records, provide valuable feedback to building occupants. For example, make building-energy-use dashboards that show occupants their current use as compared to an average (e.g., average of all post buildings).

In honor of the 42nd anniversary of Earth Day, the U.S. Consulate General Chennai launched a new recycling program and showed support by wearing green.
Resources

This list of resources that can support sustainability efforts. Some are internal to the Federal Government, the Department, and OBO, while others are public. All of these tools can be used by Post Green Teams to support their work in achieving sustainability goals.

Greening Diplomacy Initiative
The Department of State
http://www.state.gov/r/pa/pl/156053.htm
Launched by Secretary of State Hillary Clinton in 2009, the goal of Greening Diplomacy Initiative (GDI) is to improve the environmental sustainability of the Department’s global operations. Advanced by the Department’s Greening Council, GDI challenges the Department to develop and implement policies and actions that lessen its overall environmental footprint, reduce costs, and ensure sustainability remains at the forefront of U.S. foreign policy.

The League of Green Embassies
http://www.leagueofgreenembassies.org
Primarily composed of U.S. embassies, the League of Green Embassies (the League) is a global network of over 100 U.S. and foreign diplomatic missions formulating a common agenda for energy efficiency, renewable energy, and water conservation. Access to all diplomatic missions concretely illustrates the power of connecting environmental stewardship with political will to advance a platform of eco-diplomacy. Member embassies pledge to introduce innovative solutions, influence individuals and institutions in host countries, and play an important role in mobilizing public action, by:

- Providing environmental leadership at embassies
- Working with appropriate government officials in seeking additional funding for embassy greening projects
- Cooperating with counterparts and sharing ideas on energy conservation and other strategies for reducing GHG emissions
- Promoting reliance on increased use of renewable energy
- Instituting recycling programs at embassies

The League website is a forum to promote best practices, discuss common challenges, and connect solution providers to organizations seeking energy- and water-saving innovations.
**Green Team Toolkit**  
Bureau of Overseas Buildings Operation  
[http://obo.m.state.sbu/greenteam/pages/green-team-toolkit.aspx](http://obo.m.state.sbu/greenteam/pages/green-team-toolkit.aspx)

The Green Team Toolkit is an online resource developed to complement the *Guide* and further support staff engagement. With over 150 green teams, this ‘one-stop-shop’ is intended to unify the Department’s GDI messaging, facts, and branding of eco-diplomacy for posts’ greening champions. This set of prepared tools, tips, templates, and formalized guidance from management allows Post Green Teams to focus on results and benefits. The Toolkit provides practical information regarding Green Team start-up, organization, and communication techniques, as well as how to plan and execute successful community events, implement actions to produce tangible results, and recognize peers for their greening success.

**Utility Management, Analysis, and Reporting Tool**  
Bureau of Overseas Buildings Operations  
[http://obo.m.state.sbu/greenteam/pages/utilitymanagement.aspx](http://obo.m.state.sbu/greenteam/pages/utilitymanagement.aspx)

In 2007, OBO launched the Utility Data Portal to support reporting from posts on federal performance goals. In 2013, to provide more advanced tools for utility management and analysis, OBO deployed the Tririga Real Estate Environmental Sustainability (TREES) database to all posts.

TREES provides graphic feedback for over 22 metrics focused on energy and water cost and consumption, as well as GHG emissions. Baseline and annual data entered into the system enable posts to better manage building performance, compare performance with like buildings in similar climate zones, and evaluate progress in achieving sustainability goals.

Using TREES, OBO continues to achieve new breakthroughs by using information technology (IT) to measure and manage the performance of the Department’s global portfolio. Figure 3 showcases OBO’s Utility Dashboard, an interactive tool offering insights into utility consumption, costs, comparisons, and trends against targets. The Dashboard is available to all the Department’s personnel, offering the ability to drill down from a high-level view of worldwide performance to a low-level view of building performance.

**Leadership in Energy and Environmental Design**  
U.S. Green Building Council  
[http://www.usgbc.org](http://www.usgbc.org)

LEED for New Construction (LEED®-NC) provides a base for sustainable operation and maintenance. In 2008, the Department committed to
certifying new U.S. embassy and consulate construction through LEED-NC. In addition to the current list of 20 LEED certified U.S. diplomatic missions, the Department has over 30 projects registered with the U.S. Green Building Council. (see http://www.state.gov/obo/green/leedcertified/index.htm)

LEED for Existing Buildings: Operations and Maintenance (LEED® EB:OM) supports sustainable facilities management by certifying policies and plans for reporting, inspection, and review to ensure high building performance over time. Posts can demonstrate progress in green building by obtaining LEED EB:OM certification for main facilities (contact OBO for assistance) and by holding a press briefing to share this success publicly.

Figure 2: LEED® certified and registered U.S. diplomatic facilities, October 2013

<table>
<thead>
<tr>
<th>LEED Level</th>
<th>U.S. Embassy or Consulate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold</td>
<td>Brazzaville, Bujumbura, Dubai, Manila, Monrovia</td>
</tr>
<tr>
<td>Silver</td>
<td>Antananarivo, Guangzhou, Lusaka, Ouagadougou, Valletta</td>
</tr>
<tr>
<td>Certified</td>
<td>Addis Ababa, Bandar, Belgrade, Bucharest, Djibouti, Johannesburg, Manila, Panama City, Sofia, Tijuana</td>
</tr>
<tr>
<td>Registered</td>
<td>Abuja, Beijing, Bishkek, Cotonou, Dakar, Helsinki, Islamabad, Jakarta, Kabul, Karachi, Kyiv, London, Malabo, Maputo, Mbabane, Mexico City, Monterrey, Moscow, N’Djamena, Nouakchott, Oslo, Podgorica, Port Moresby, Pristina, Rabat, Riga, Sana’a, Santo Domingo, Sarajevo, Taipei, The Hague, Vientiane</td>
</tr>
</tbody>
</table>

Data and Image Source: Bureau of Overseas Buildings Operations