

# PHASE 4: PROJECT EXECUTION AND QUALITY CONTROL

After a project has been selected and its components have been designed to take advantage of available human and financial resources, the project team can shift to execution. In Phase 4, the project team will implement the performance and reporting plans, coordinate project partners, and continue to engage the public regarding progress.

## 4.1 Implement Schedules, Performance, Measurement, and Reporting Plans

### 4.1.1 Identify All Project Permits

The application for and receipt of project permits are critical to project success, and typically are a major component of setting realistic schedules and performance plans. While an experienced project permitting partner can help minimize unforeseen costs and delays, all project partners need to set realistic expectations regarding the permitting process, and a comprehensive list of needed permits and their requirements can help. Beyond knowing what permits are required, planning for applications and collecting the relevant data in advance will avoid resubmissions and rework. Additionally, if relevant government agencies are streamlining their permitting processes, accurate information on the permitting experience will help them reduce any inefficiencies.

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#### Phase 4 Describes How To:

- 4.1 Implement Schedules, Performance, Measurement, and Reporting Plans
  - 4.2 Mitigate Adverse Environmental and Social Impacts
  - 4.3 Maintain Transparency in Project and Vendor Selection Processes
  - 4.4 Develop and Implement, When Appropriate, a Project Closeout Process
  - 4.5 Engage Stakeholders to Keep Progress Visible
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### Example Project Permits Questionnaire

- What permits or authorizations are required from the local utility or regulating body?
- If leasing the site, what permits or authorizations are required from site owner?
- What permits or authorizations are required from local jurisdictions or agencies?
- What permits or authorizations are required from central government agencies?
- What information does each permit or authorization require in order to be processed?
- Is that information free or will cost be incurred?
- What is the cost, and when must it be expended to meet the schedule of the project?
- Who will pay the costs of any work or direct cost necessary to accomplish work necessary to achieve approvals, authorizations, or permits?
- Could the timing of permits and authorizations significantly impact the costs or economics of the project? Could that put the project in jeopardy?
- Is litigation of permitting issues expected or probable?
- Will delays in permitting impact financing?
- What if the project is not built? Are any parties in the process expecting reimbursement of some, or all, incurred costs?

Adapted from *Developing Renewable Energy Projects Larger than 10 MWs at Federal Facilities* (Federal Energy Management Program 2013).

### 4.1.2 Set a Realistic Project Schedule

Setting and keeping a realistic schedule is fundamental to project success, in part because it requires the project team to imagine what success looks like and articulate the time and effort required for each step along the way. When setting a schedule, it is important to include “slack time” for when resources are unavailable, and time for meetings, as regular meetings are an integral, yet time consuming, part of project execution. If schedules change, document the changes and collect correspondence to explain why the schedule required adjustment and approve the changes.

Several tools, including a Gantt chart and Critical Path Analysis, can aid in setting and monitoring schedules. Regardless of whether the project team employs a formal method, an arrow diagram may be useful to help the project team visualize the resources that will be required in what order before a desired result will be achieved. Templates for these charts are sometimes included with or available for spreadsheet software. Free online tools offer similar functionalities.

Part of keeping to a schedule requires coordinating with management and other governmental entities involved in, but not responsible for, project success. For example, permitting construction can involve nonenergy agencies, yet their review is necessary to keep the schedule. The Responsible-Accountable-Consulted-Informed (RACI) diagrams from Phase 3 can be useful in determining which other agencies will participate in project development, and working project schedules into performance plans can help ensure this coordination proceeds effectively. If a project champion was identified in Phase 3, make sure to call upon the champion if the team is faced with—and unable to overcome—a challenge after a good faith effort.

### 4.1.3 Performance Plans

Success will depend on many factors, including the performance of project team members. The first steps in project execution can involve Request for Proposals, technology evaluation, or data collection, but in simple terms, it starts with a phone call or an email from the project team. Setting expectations for project team members can ensure that all members understand their roles on the project and the contributions they will make to its success.

A performance plan clearly states those roles and responsibilities for team members, and can identify the training and resources they need to attain the results expected of their performance. It can also link responsibilities to the project schedule to ensure individual project team members understand when they need to complete certain tasks to achieve their results on time. Additionally, performance plans help the project team to appreciate the value of their teammates and allow for recognition of individual and team performance.

### 4.1.4 Using Metrics To Track Progress

Although some responsibilities are task oriented, a focus on outcomes will ensure that processes achieve desired results. Metrics do not need to count numbers, but can track results critical to project success.

Outcomes that may be useful to track are:

- Finalizing equipment specification
- Timely issue of permits
- Close of negotiation with vendors and/or finance partners
- Timely delivery of equipment
- Trainings completed
- Testing and accepting equipment
- Issuance of purchase orders
- Timely reporting with appropriate data
- Equipment in use
- Number of public engagement activities.

### 4.1.5 Project Reporting

Beyond ensuring the project is on track to succeed, collecting project information for project progress reporting is one of the most important tools to communicate progress throughout the government and out to partners and the public. Building on the planning in Phase 3, simple processes to collect and present progress data in a uniform way can mark successes and help maintain support for the project.

Although data requirements, the frequency of reporting, and who compiles the reports will vary by project type, risk, and partner expectations, the requirements and frequency should be a manageable way to summarize project status. The reporting process collects information from project staff for management and other stakeholders, so team leads or project managers are likely in the best position to compile and finalize these reports. Common status reporting periods are quarterly or semiannually. It is important to note that larger projects often have more comprehensive annual reporting requirements.

The RACI diagrams from Phase 3 can help identify the appropriate audience for the reports and, in turn, the appropriate information to include in them. Common information to include in quarterly or semiannual reports includes:

- Summary of activities since the last report
- Budget status and rate of expenditure (burn rate)
- Milestone and metric status
- Any upcoming challenges for management awareness.

#### **Anticipate Public Opposition; Engage and Educate Stakeholders Early and Often**

As part of the Energy Development in Island Nations initiative launched in early 2010, the U.S. Virgin Islands (USVI) began working with the U.S. Department of Energy and the National Renewable Energy Laboratory to develop a strategy for reducing the territory's 100% reliance on fossil fuels 60% by 2025.

Based on preliminary modeling and analysis, the Virgin Islands Water and Power Authority (WAPA) identified waste-to-energy (WTE) as a significant opportunity for the USVI because municipal solid waste was an abundant renewable resource—in fact, the territory's landfills were nearing capacity and were in violation of U.S. Environmental Protection Agency standards. Because WTE provided a potential solution to USVI's waste management problem and its energy challenges, it was a key component of the territory's original strategy for achieving its 60% goal, representing 8% to 12% of the envisioned 2025 energy mix. The proposed WTE project, which ultimately failed, offers a valuable lesson on the importance of proactively addressing a common barrier to successful renewable energy project deployment: lack of stakeholder buy-in.

In August 2009, WAPA and the Virgin Islands Waste Management Authority had signed agreements with a private firm to build two waste processing and generation plants—one on St. Thomas and one on St. Croix. While the project team did not attempt to keep the project a secret, they did not put a great deal of thought or effort into communicating the risks and benefits to stakeholders. Rumors spread about the environmental impacts and costs of the project. And the official announcement about the signed agreement caused an immediate public outcry.

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**Anticipate Public Opposition** *from page 4-3*

Stakeholders had legitimate concerns about the legal, financial, and environmental ramifications of various aspects of the deal, including:

- Emissions from the proposed WTE power plants
- Specifics about the project, such as the wholesale cost and the amount of power to supply to WAPA
- Costs associated with disposing of the territory’s waste (“tipping fees”)
- Potential financial obligations of the USVI government should the Virgin Islands Waste Management Authority be unable to supply the minimum amount of waste required for conversion to refuse-derived fuel
- The project owners planned use of petroleum coke—a byproduct of the oil refining process—as a supplemental fuel source in the event that the territory’s waste stream fell below the minimum requirements.

In the face of strong community opposition, the senate in 2010 rejected one of the land leases that was a lynchpin of the original plan. In response, the developer modified the plan, eliminating the use of petroleum coke and proposing a single plant on St. Croix. The project partners also conducted a series of stakeholder engagements to educate the public on their extensive pollution control measures and the state of the art in WTE technology. A well-researched technical report on WTE released in August 2011 provided project partners and proponents with the hard data they needed to address remaining concerns. By that time, however, public opposition had reached critical levels and legislators were under intense pressure to reject the revised plan. In February 2012 the USVI senate voted down a second proposed land lease agreement, effectively killing the project.

The project team failed to anticipate and address stakeholder concerns about WTE and underestimated the power of public opinion. As a result, the team missed the small window of opportunity early in the project preparation phase to address concerns proactively through a carefully managed outreach, education, and engagement strategy. Although this project did not succeed, waste management is an ongoing issue in the territory, and the Virgin Islands Waste Management Authority continues to investigate WTE as a potential solution.

**Key Takeaways**

- Consult with key stakeholders about issues and barriers early in the planning stages.
- “Get out in front of the story,” responding directly to concerns with hard data and carefully crafted key messaging.
- Educate and inform key stakeholders about proposed technologies and project specifics early and often.
- Taking a transparent approach to information management is a key to successfully developing stakeholder buy-in and winning the public’s trust.



A landfill-gas-to-energy conversion system at Bovoni Landfill on St. Thomas will bring the USVI one step closer to meeting its clean energy goal. *Photo from Don Buchanan, VIEO, NREL 20817*

## 4.2 Mitigate Adverse Environmental and Social Impacts

Although generally energy efficiency and small to midsize renewable energy projects will not require significant environmental mitigation, even small construction projects can have adverse impacts on neighboring communities. Although for many projects these impacts will be slight, it is important to take steps to mitigate them. Waste management, noise and vibration, land and water use, and biological, cultural, and coastal zone management are some of the key considerations when evaluating the potential environmental and social impact of a project.

For example, the noise and light pollution that can result from wind projects can be mitigated by siting these projects appropriately. Similarly, glare from solar panels can create light pollution, and site selection can mitigate that impact.

## 4.3 Maintain Transparency in Project and Vendor Selection Processes

Transparency in Phase 4 demonstrates deliberate and considered decision-making, which mitigates a variety of project risks, facilitates stakeholder support, and ultimately improves the chances of project success.

Transparency can be maintained by articulating a few key components of a successful project, and communicating those expectations to project partners and potential vendors. In some instances, weighting those criteria according to importance to success allows partners and vendors to shape well-rounded and comprehensive project plans. Furthermore, the process of articulating components of success and their relative importance helps set expectations for the project team and outside stakeholders, paving the way for public recognition of successful projects.

## 4.4 Develop and Implement, When Appropriate, a Project Closeout Process

Some projects, such as direct funding or facility construction, may benefit from a project closeout process. During closeout, the project lead accepts final delivery of the work, so this may be when warranties begin to toll and insurance needs transfer from the contractor to facility owner. It is also another opportunity to ensure that facility operators have received the appropriate training necessary to operate and maintain project assets.

Typically, closeout involves the calculation and documentation of all costs and expenses, and written statements that the work is being accepted and that the equipment was tested and meets specification. This documentation is often required to release final payments, and provides the opportunity to compare planned budget to actual expenditures.

Along with financial information, other project documentation, such as plans, correspondence, relevant meeting notes, schedules, deliverables, scope changes, and status reports, should be collected and archived. This documentation can provide a key record of project decision-making, not only for future projects or project reviews, but also warranty claims. It also allows for knowledge transfer from the project team to owners or operators of any equipment.

Closeout can involve the reassignment of project resources, including team staff time, and performance reviews for staff and contractors. Devoting time to staff transitions can help ensure that project staff members remain through closeout because they have confidence about their next position, and will minimize disruptions to staff availability at the close of a project.

## 4.5 Engage Stakeholders To Keep Project Successes Visible

The continued support of the public is important to individual projects and to the overall Caribbean Energy Transition vision. Major project milestones, such as permit applications and beginning of construction, provide opportunities to communicate progress to the public and to solicit feedback from key stakeholders, such as project neighbors or consumers.

Events such as groundbreakings and ribbon cuttings can raise the profile of projects, and give partners and stakeholders the opportunity to interact. Although not directly related to project success, continuing this type of communications and outreach will demonstrate the value of the project and emphasize the capability of the community to realize its energy vision.

### El Hierro Wind Farm With Pumped Storage

El Hierro, one of Spain's Canary Islands without any fossil fuel resources, set a goal of energy self-sufficiency in the late 1990s, and will realize its vision in 2014. As part of its vision, the bulk of energy supplied to the system would come from a hydroelectric plant using water pumped to a reservoir by wind turbines. A partnership called Gorona del Viento El Hierro was formed between the island government, one of Spain's largest utilities, and the Canary Islands Technological Institute to oversee the project, and in 2007, this project was selected for execution.

The engineering consultant selected to support the project identified an alternative design that would improve system efficiency. By supplying electricity from the wind turbines directly to the grid—rather than feed the pumping station only—the hydroelectric facility would then provide spinning reserves and additional generating capacity when needed. In this configuration, additional electricity generated by the wind turbines is used in the energy system—not lost in the transfer at the pumping stations—thereby eliminating the need for some pumping infrastructure.<sup>3</sup>

The experience of El Hierro illustrates the benefits of flexibility in planning and executing projects. The new facility is expected to lower electricity costs by approximately 23%.<sup>4</sup>

## 4.6 Phase 4 Resources

### Lessons Learned

- U.S. Virgin Islands Clears the Way for Unprecedented Levels of Solar Energy

### Template

- Periodic Report

### Sample

- Asia-Pacific Economic Corporation Government Procurement Experts Group  
Non-Binding Principles on Government Procurement: Transparency

### Information Resources

<sup>3</sup> <http://www.renewableenergyworld.com/rea/news/article/2012/10/creating-a-hybrid-hydro-wind-system-on-a-spanish-island?page=all>.

<sup>4</sup> [http://elpais.com/m/elpais/2014/06/27/inenglish/1403882352\\_828317.html](http://elpais.com/m/elpais/2014/06/27/inenglish/1403882352_828317.html).



## LESSONS LEARNED

### U.S. Virgin Islands Clears the Way for Unprecedented Levels of Solar Energy

In the U.S. Virgin Islands (USVI), solar energy is helping to alleviate the territory's dependence on fossil fuel while stabilizing and reducing energy costs.

#### Challenge

The territory's successes with solar energy started in 2010 when USVI Gov. John P. de Jongh Jr. set an aggressive goal to reduce the USVI's dependence on fossil fuel 60% by 2025. Like many island communities, USVI was almost 100% dependent on imported oil for electricity and transportation, leaving it vulnerable to global oil price fluctuations with potentially devastating economic effects.

#### Solution

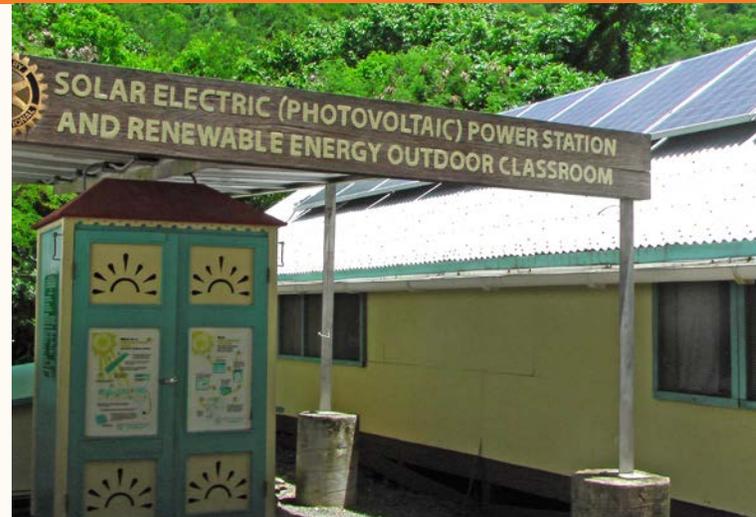
Collaborating with the U.S. Department of Energy (DOE) and the National Renewable Energy Laboratory (NREL), the Virgin Islands Energy Office and the Virgin Islands Water and Power Authority (WAPA) worked with a diverse set of public and private stakeholders to establish the territory's baseline energy use, assess its clean energy resources, and identify the most viable and cost-effective solutions to address its energy challenges.

The resulting strategy, while incorporating a diverse mix of renewable energy and energy efficiency technologies, identified larger and distributed scale solar resource development as an important first step on the road to meeting USVI's aggressive clean energy goal. In addition to having an excellent solar resource, USVI had established policies that provided an opportunity for developers to capitalize on this abundant source of clean, renewable energy.

In May 2011, WAPA released a Request for Proposal (RFP) to install 10 megawatts (MW) of solar photovoltaics (PV) by December 2013. In order to achieve this milestone, WAPA needed to reduce the risks associated with renewable energy development, attract quality developers, and ensure that proposed solar projects could be financed successfully.

Tapping into the technical expertise and renewable energy project development experience DOE and NREL brought to the table, WAPA was able to address these common project development challenges by:

- Helping identify optimal sites for solar PV systems
- Identifying policy and regulatory changes that would address current barriers, such as uncertainty around interconnection procedures and agreements
- Updating the USVI's solar resource assessment to more accurately gauge the potential impact of solar energy in the territory
- Modeling the WAPA grid and developing a strategy to avoid grid integration issues by distributing PV systems geographically



Almost 1,500 solar water heating and PV systems have popped up throughout the territory since the EDIN-USVI project launched in February 2010, and 15 MW of distributed solar PV are either in place or under construction. *Photo from Don Buchanan, VIEO, NREL 20152*

- Analyzing financial and resource data—including 1-minute data from a 451-kilowatt-hour (kWh) solar PV system installed at the airport on St. Thomas—to model the effects of high-penetration renewable energy on the existing WAPA generation system and grid.

These measures, which helped break down many of the common barriers to renewable energy project development, resulted in an overwhelmingly positive response to WAPA’s solar RFP. On June 4, 2012, it signed six power purchase agreements for a combined 18 MW of solar energy.

As a result, three companies are investing a total of \$65 million to install 18 MW of solar in the USVI—9 MW on St. Thomas and 9 MW on St. Croix.

The PV systems will generate 9 MW of solar power in each district, which WAPA will purchase at an average cost of approximately \$0.18/kWh over the 25-year term of the projects. Not only is this significantly less than what it would cost the utility to produce the same amount of diesel-generated power at its plants, but it represents a groundbreaking shift in the territory’s energy economy—and sets a new standard for community renewable penetration.

On St. Croix specifically, 9 MW of solar power represents nearly 20% of the island’s peak demand, an unprecedented level of renewable energy penetration for a community of its size.

### Key Takeaways

The USVI’s successful solar projects provide a model for other islands to follow in developing their renewable resources, showcase the technical and economic viability of high-penetration renewable energy on islands, and guide other island communities in fundamentally changing the way they generate and use energy. Through its leadership on the clean energy front, the USVI is charting the course to a more secure energy future for the Caribbean region and for islands around the world.

### Airport Solar System Largest in the Caribbean

- Solar energy is making its mark in USVI, as evidenced by the large-scale solar PV system installed at the Cyril E. King Airport in St. Thomas.
- In 2011, more than 1,800 PV panels were installed along the runway of the Cyril E. King Airport, totaling 451-kilowatt (kW)—one of the largest solar PV systems in the Caribbean.
- The 451-kW PV system flanking the airport’s landing strip was funded by a \$2.9 million DOE grant through the Recovery Act. At 1,500 feet long and 14 feet wide, the installation is the largest solar project in USVI and will produce approximately 15% of the airport’s energy needs, or 600,000 kWh annually.
- The project, a joint effort between the Virgin Islands Port Authority and WAPA, received technical assistance from NREL through the EDIN initiative. The Port Authority planned to use energy produced to meet the airport’s energy load and feed any excess back into WAPA’s grid to receive credit toward its power bill. The Port Authority projected that this would reduce its utility bills by as much as \$400,000 a year—representing an annual energy cost savings of approximately 15%.

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“I don’t know of another area or jurisdiction anywhere that has that significant of a portion of their peak demand in a renewable resource such as solar, so this is not only a significant event for the territory but for solar energy everywhere.”

—Hugo Hodge Jr., WAPA Executive Director

## Template: Periodic Report

<b>Project Name:</b>	
<b>Date of Report:</b>	<b>Project Start/End Dates:</b>
<b>Project Location(s):</b>	<b>Funds Disbursed This Period:</b>
	<b>Funds Remaining:</b>

### Summary of activities since last report:

Describe purchases/expenditures, awards made, equipment installed, and any other milestones or metrics reached in this period. Explain progress or delays, or anticipated scope of work changes. Provide update on risks, whether significant risks are no longer likely, or whether any materialized and how they were addressed.

Project Task/Activities	Metric/Milestone Description	On time? On budget?	Date Completed

### Task/activities expected in next report:

**Attachments:** Draft Press Release Concerning Milestone X



## Sample: Asia-Pacific Economic Cooperation (APEC) Government Procurement Experts Group Non-Binding Principles on Government Procurement: Transparency

(September 1997, pulled from <http://www.osec.doc.gov/ogc/occic/apec.html>)

### Introduction

1. Under APEC's collective action plan on government procurement (GP), a set of non-binding principles on GP will be developed in 1997–2000 for adoption by members on a voluntary basis. In pursuing this work, the Government Procurement Experts Group (GPEG) has decided to start with the principle of transparency.
2. The GPEG has identified a set of elements pertaining to the principle of transparency in GP, which are set out in the ensuing paragraphs. Examples on practices are also provided for the purpose of illustrating the possible ways to give effect to these elements, and are not intended as prescriptions of how these elements should be given effect in practice. It should also be noted that the elements of transparency in GP identified by the GPEG are non-binding and individual economies are in the best position to decide on the applicability of individual elements of transparency to them, and how best to translate these elements into practical measures, taking into account the specific characteristics of their economy and possibly the costs and benefits of adopting specific transparency measures.

### Elements of Transparency

3. The general principle is that sufficient and relevant information should be made available to all interested parties consistently and in a timely manner through a readily accessible, widely available medium at no or reasonable cost. This general principle is applicable to all aspects of GP, including the general operational environment, procurement opportunities, purchase requirements, bid evaluation criteria and award of contracts, as further elaborated in paragraphs 5 to 14.
  - **Sufficiency and relevance of information:** to enable potential suppliers to make informed decisions. For example, potential suppliers must have access to information on the conditions for participation and the requirements of the intended procurement in order to decide whether to participate and to prepare a responsive offer.
  - **Timeliness:** to ensure that the information is valid and useful when available to the receiver.
  - **Availability to all interested parties:** to ensure that the procurement process is fair to all participants and seen to be fair.
  - **Through a readily accessible medium at no or reasonable cost:** to ensure that information is accessible in practice.
  - **Consistency:** the objectives of maintaining a transparent procurement system can only be achieved if the system remains consistently transparent. This also includes making information up to date and informing relevant parties of changes and additional information promptly.
4. Notwithstanding the above, the following information may be withheld: commercially sensitive information, and information the release of which would prejudice fair competition among suppliers, impede law enforcement, contrary to public interest or compromise security of the economy concerned. Where such information is withheld, the reason should be given on request.

### **The general operational environment**

5. The laws, regulations, judicial decisions, administrative rulings, policies (including any discriminatory or preferential treatment such as prohibitions against or set aside for certain categories of suppliers), procedures and practices (including the choice of procurement method) related to GP should be transparent.
6. This is to let suppliers know the rules of the game so that they can decide whether to participate. In practice, this can include—
  - publishing these “rules” in a medium which is readily accessible to all.
  - publishing either a positive or negative list of the entities subject to these “rules”.
  - publishing any changes immediately.
  - establishing contact points for enquiries.
  - wherever possible, providing a description of the above information on the APEC GP Home Page and linking APEC members’ individual GP Home Pages, where available, with the APEC GP Home Page.

### **Procurement opportunities**

7. Procurement opportunities should be transparent.
8. This would encourage wider participation leading to increased choices for the buyer and enhanced competition, contributing to achieving better value for money in procurement activities. In practice, this can include—
  - making open and competitive tendering the preferred method of tendering. Where other procurement methods are to be used, any procurement invitations issued should indicate the intended method.
  - where open tendering is adopted, publishing procurement opportunities in a medium readily accessible to suppliers (e.g. official journals/gazettes, newspapers, specialised trade journals, Internet, and through embassies and consulates.)
  - allowing adequate and reasonable time for interested suppliers to prepare and submit responsive bids.
  - publishing contact details of purchasers, and their product/service purchase interests, for suppliers wishing to register their interest in being notified of bidding opportunities which may not be publicly advertised.
  - making early advice of complex high-value procurement needs available to interested suppliers through staged procedures such as public requests for information, requests for proposals and invitations for pre-qualification, and allowing adequate time for interested suppliers to prepare and submit a response.
  - making available requirements and procedures for pre-qualification of suppliers.

### **Purchase requirements**

9. All the information required for suppliers to prepare a responsive offer should be made available.
10. This is to facilitate effective and efficient participation by potential suppliers in the procurement exercise. Also, because potential suppliers know the specific requirements, the non-responsive offers that the buyer may have to process can be minimized, increasing the operational efficiency of the buyer. In practice, this can include—
  - including in procurement notices the following information : the nature of the product or service to be procured, specifications, quantity, time frame for delivery, closing times and dates, where to obtain tender documentation, where to submit bids, and contact details from which further information can be obtained.
  - publishing any changes to the above information immediately.
  - providing tender documentation and other information to suppliers promptly on request.
  - wherever possible, drawing up specifications in terms of performance/functional/operational requirements using international or other relevant standards.

### **Bid evaluation criteria**

11. All criteria for evaluating bids should be transparent and bids should be evaluated and contracts awarded strictly according to these criteria.
12. This is to ensure fairness and integrity. In practice, this can include—
  - setting out in procurement notices and/or tender documentation all evaluation criteria, including any preferential arrangements.
  - maintaining proper record of decisions.

### **Award of contracts**

13. The award of contracts should be transparent.
14. This would demonstrate government accountability to suppliers and the public. In practice, this can include—
  - publishing the outcome of the tender including the name of the successful supplier and the value of the bid.
  - as a minimum, promptly notifying unsuccessful suppliers of the outcome of their bids and where and when contract award information is published, and debriefing unsuccessful suppliers on request.

### **Due process**

15. Due process and public accountability are essential elements of fair, open and impartial procurement procedures, and the availability of an avenue/channel for review of complaints is an element of transparency. In practice this can include—
  - designating a body/person for the purpose of reviewing supplier complaints about procurement processes which are not able to be resolved through direct consultation with the procuring agency in the first instance. This may take the form of an independent authority.
  - making information on review procedures readily available.
  - making the review process available equally to domestic and foreign suppliers.



## Information Resources for Phase 4

These information resources and useful links are illustrative, not comprehensive.

**A Handbook for Measuring Employee Performance: Aligning Employee Performance Plans with Organizational Goals (U.S. Office of Personnel Management [OPM] 2011).** This handbook presents an eight-step process for developing employee performance plans that are aligned with and support organizational goals.

**Community Wind Toolkit (Rural Energy for America Program 2011).** This publication describes the tools needed to create a successful wind energy project.

**Construction Project Close-Out Checklist (Alabama 2006).** This checklist covers the closeout of a building construction project.

**Cost Estimating and Assessment Guide (U.S. Government Accountability Office [GAO] 2009).** This report guides project managers in estimating costs reliably.

**DAU Program Managers Tool Kit (U.S. Department of Defense 2011).** This comprehensive guide is designed as a training resource for project and contract managers.

**Environmental and Social Policy Statement (Overseas Private Investment Corporation 2010).** This policy provides notice of the general environmental and social requirements that the Overseas Private Investment Corporation applies in evaluating prospective projects.

**Guide to Renewable Energy Facility Permits in the State of Hawaii (Hawaii 2013).** The state of Hawaii provides this guidebook to reduce the uncertainty surrounding which permits are required for which activities in a given renewable energy project.

**Key Considerations for Implementing Interagency Collaborative Mechanisms (GAO 2012).** This report offers an overview of mechanisms to facilitate interagency collaboration.

**Land-Based Wind Energy Guidelines (U.S. Fish and Wildlife Service 2012).** This guidance provides a structured, scientific process for addressing wildlife conservation concerns at all stages of land-based wind energy development.

**Life Cycle Asset Management: Quality Assurance (U.S. Department of Energy 1996).** This guide helps project management teams develop and implement quality assurance programs for their projects.

**Project Closeout Checklist (National Science Foundation 2006).** This checklist provides a real-world example of the various components of a large project closeout.

**Project Management Guideline: Section 5 Project Closeout (Virginia Department of Transportation 2006).** This publication describes the various steps to take in an effective project closeout.

**Quality Management Principles (International Organization for Standardization [ISO] 2012)**ISO developed these eight principles to inform ISO 9000, the international standard on quality management and quality assurance.

**Renewable Energy Permitting Barriers in Hawaii: Experience from the Field (National Renewable Energy Laboratory [NREL] 2013).** This report documents the permit streamlining project undertaken by the state of Hawaii.

**Review of Policies and Recommendations for Wind Turbine Setbacks (Minnesota 2011).** This survey compiles rules on the siting of wind turbines from different countries.

**Schedule Assessment Guide (GAO 2012).** This report guides project managers in setting reliable program schedules.

**Terrestrial Wind Turbine Siting Report (Rhode Island 2009).** This survey compiles rules on the siting of wind turbines from a few US jurisdictions.

**The Economic Partnership Agreement between the CARIFORUM States and the European Community and its Member States.** Chapter 3 of Part II contains useful information on transparency in procurement.

The **Environmental, Health and Safety website** (<http://www.ifc.org/ehsguidelines>) from the International Finance Corporation hosts the most updated versions of the World Bank Group Environmental, Health, and Safety Guidelines.

The **Hawai'i Programmatic Environmental Impact Statement** (<http://Hawai'icleanenergypeis.com>) contains analysis of the potential environmental impacts of a number of energy efficiency and renewable energy activities and technologies.

The **Measuring Performance Management website** <http://www.opm.gov/policy-data-oversight/performance-management/measuring/> from OPM contains recommendations, advice and guidance on effective performance management.

**The Non-Binding Principles on Government Procurement from the Asia-Pacific Economic Cooperation Government Procurement Experts Group.** These principles provide helpful guidelines in structuring transparent procurement.

The **Performance Management Program Guide** (<http://www.tbs-sct.gc.ca/tou/pmc-dgr/pmpg-mpgr-eng.asp>) provided by the Treasury Board of Canada contains information on how to establish employee performance management programs.

The **Renewable Energy Contracts Library** (<https://financere.nrel.gov/finance/content/renewable-energy-contracts-library>) hosted by NREL contains a number of real-world renewable energy contracts, including Request for Proposals.

**The UNCITRAL Model Law on Public Procurement.** This model law lays out many international best practices on building an effective and efficient public procurement system.

The **Unified Process Project Management Guide** ([http://www2.cdc.gov/cdcup/library/practices\\_guides/#.U812VfldWSr](http://www2.cdc.gov/cdcup/library/practices_guides/#.U812VfldWSr)) provided by the U.S. Centers for Disease Control and Prevention hosts downloadable briefs and forms that provide guidance to project teams about key project management practices, including status reporting.

**Tools and Techniques for Implementing Management Systems (Institute of Management Accounting 1998).** This brief provides tools and techniques that can facilitate the development of an Integrated Project Management System, including some common key success factors.