

Spotlight: Managers and Analysts

Opening Activity: Quick Patterns

Day	Solar Output
1	80 kWh
2	70 kWh
3	90 kWh
4	85 kWh
5	95 kWh
6	75 kWh

Notes:

kWh = kilowatt hour, a standard measure of energy

The Big Question

How do analysts and managers contribute to designing and implementing climate solutions?

My Climate Goals

When you complete this lesson, you'll be able to

1. Explore how analysts and managers contribute to climate-critical solutions across key technology solutions
2. Identify the skills, training, and experience needed to work in analyst and management roles in the field of clean energy
3. Discuss which aspects of a career as an analyst or manager are aligned with your skills, interests, and desired work environment

Notes:

Project Back on Track

Instructions

You are managing a critical clean energy project for your town, but the project has been delayed. Analyze the data provided for your assigned project to identify the cause. Then, use the prompts below to create a plan to get the project back on track. Set a goal for your project, determine a communications plan, and identify any additional resources or adjustments needed to complete this project.

Project Planning Prompts

What underlying challenges caused the delay or delays in your project?

What is your new project goal, and what steps will you take to achieve it?

Who do you need to communicate with, and what do you need to communicate?

What additional resources do you need? What adjustments must be made?

Community Solar Installation

Group 1

You are managing a project to install a community solar array to supply power to several public buildings in the area. The project has encountered delays due to unexpected equipment delivery issues and rising material costs. It is currently behind schedule and over budget. Community members are starting to get angry, and the city has been receiving complaints about disruptions caused by the delay.

Original deadline: March 1 | **Expected completion date:** April 15

- **Cause of delay:** Supplier delays
 - Solar panels were expected in December but delivered in January
 - Installation was scheduled to begin in February and was delayed until March due to missing components

Initial budget: \$250,000 | **Current spending:** \$275,000

- **Cost increases:** Rising transportation costs and a 10 percent increase in solar panel prices from the original supplier quote
- **Potential savings:** Alternative supplier with a 5 percent lower cost per panel but an additional two-week delay for orders

Stakeholder feedback:

- **The solar equipment supplier** claims that the delays are due to high demand and production constraints.
- **Community representatives** are frustrated by delays and concerned about losing support for the project.
- **The city officials** are concerned about exceeding the approved budget and will only consider additional funding if there is a clear recovery plan.

Notes:

Offshore Wind Turbine Maintenance

Group 2

An offshore wind farm has several turbines that require urgent maintenance. You have been hired as a maintenance manager to oversee the ongoing upkeep of the turbines, and you are responsible for repair schedules and team assignments. The repair team is currently understaffed, and a parts shortage results in delays.

Maintenance log:

- **Turbine 1:** Repaired twice in the last month; ongoing issues with gear alignment are causing reduced power output (parts are available from an alternate supplier, but it will take five days to receive them)
- **Turbine 2:** Severe wear on blades; blades need to be replaced immediately to avoid turbine shutdown (the part is expected to arrive in two weeks; faster delivery is available for a 15 percent surcharge)
- **Turbine 3:** Minor wear detected; no immediate maintenance required

Staffing report:

- **Current team size:** Four technicians; typically, six technicians are needed to meet maintenance demands
- **Staff availability:** Two technicians are on medical leave
- **Productivity impact:** Repairs take 30 percent longer due to limited staff

Stakeholder feedback:

- **The equipment suppliers** report backlogs due to the high demand for similar parts across multiple projects.
- **Local government** officials are concerned about the environmental and economic impact of reduced energy production and emphasize the need for urgent staffing solutions.

Notes:

Electric Vehicle Transit Hub Charging Station

Group 3

A new electric vehicle (EV) charging station is being installed at a downtown transit hub. The project has received considerable attention from local press and government officials, so there is a lot of pressure for it to go smoothly. However, issues with permit approvals and site preparation have caused significant delays. The previous project manager has left the project, and you have been hired to get it back on track.

Original project deadline: February 10 | **Expected completion date:** March 20

- **Reason for delay:** Delayed permits and utility line complications
 - Permit approval was delayed by two weeks
 - Excavation and site prep were paused due to unexpected utility lines; additional work is required to relocate the utility lines before work can resume

Initial budget: \$120,000 | **Current spending:** \$110,000

- **Projected additional costs:** \$15,000 to cover utility line relocation and permits

Stakeholder feedback:

- **The city permits office** reports that additional permit requirements were needed due to utility complications.
- **Local business owners** are concerned about noise and disruption and want assurances that the project will be completed on time.
- **The transit hub operations manager** emphasizes the importance of minimizing disruption to transit hub operations and completing the project promptly.

Notes:

Lesson Key Points

- Managers are one of the most in-demand jobs in clean energy.
- Communication skills are essential for effective managers.
- Managers and analysts have similar skill sets but perform different roles.

Additional key points:

Closing Activity

What is one skill that makes managers and analysts crucial to successful clean energy projects?

What is one skill you have that would make you a good manager or analyst?

Careers of interest you heard about in this lesson: