



### Area Source

A source of hazardous air pollutants (HAPs) that *does not* have potential to emit 10 tons per year or more of a single HAP, or 25 tons per year or more of any combination of HAPs.

### BACT

Best Available Control Technology. Pollution control standard used by the EPA on a case-by-case basis for plants impacted by New Source Review guidelines.

### BART

Best Available Retrofit Technology. Standard requiring retrofit pollution control equipment for sources whose emissions contribute to air haze in national parks, wildernesses and monument areas. Mostly applies in Western U.S. states.

### BTU

British Thermal Unit. Amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit at sea level.

### CAA

Clean Air Act. U.S. Federal law requiring the Environmental Protection Agency to develop and enforce regulations to protect and improve air quality.

### CEMS

Continuous emission monitoring system, used to track certain stack emissions, usually SO<sub>2</sub> (sulfur dioxide), NO<sub>x</sub> (nitrogen oxides), opacity and O<sub>2</sub> (oxygen).

## Scenario Planning - Overview

Scenario planning is a process for addressing long-term uncertainty by creating several alternative “stories” about what might happen in the future and the most appropriate responses in each case.

Scenarios are built around a focal issue—a specific decision or topic that needs to be addressed. Each story is built from “predetermined elements” (things we *can* predict) and “critical uncertainties” (things we *can’t* predict), impacted by key factors in the environment and the driving forces behind them.

## Scenario Planning – Applications

The stories developed during scenario planning are used to think about implications of different possible futures, and to identify “leading indicators” or “signposts”—signals that a particular scenario (or elements of it) is beginning to unfold. By keeping an eye peeled toward these action triggers, it’s possible to “preload” important decisions: *“If X happens, I will do Y.”*

Scenario planning is a powerful process for avoiding knee-jerk reactions or decision paralysis. It has many applications, ranging from developing business strategies to making personal decisions like whether or not to pursue a particular higher education degree or switch careers.

## Takeaways

No matter where you are in the regulatory compliance journey, scenario planning can help you gain insights that will save time and money. For example:

- Make better-informed business decisions
- Evaluate proposed regulatory compliance solutions
- Assess resources available for baseline assessment

### Clinker

The rock-like material produced in a cement kiln, used with other additives to make cement.

### CO

Carbon monoxide. Gas resulting from incomplete combustion of carbon.

### GACT

Generally Available Control Technology. Small HAP sources can sometimes use GACT to comply with emission limit rules by, for example, optimizing combustion or burning low-polluting fuels.

### HAP

Hazardous Air Pollutant. Pollutants such as mercury, carbon monoxide, nitrogen oxides and hydrocarbons that cause or may cause cancer and other serious health effects in humans, or that adversely impact the environment or ecology.

### HCl

Hydrogen chloride, aka hydrochloric acid.

### Hg

Mercury

### Major Source

A source of hazardous air pollutants (HAPs) that *does* have potential to emit 10 tons per year or more of a single HAP, or 25 tons per year or more of any combination of HAPs.

*continued on back*

**MACT**

Maximum Achievable Control Technology.

**Method 17**

Method of stack-testing, involving probes and filters inside the duct to measure pollutants in the flue gas.

**NESHAP**

National Emissions Standards for Hazardous Air Pollutants.

**NO<sub>x</sub>**

Nitrogen oxides.

**NSPS**

New Source Performance Standard. EPA standard for certain pollutants, applied to new, modified or reconstructed sources.

**NSR**

New Source Review. Relatively stringent EPA emission standard applying to new and modified pollutant sources in areas that are not meeting national air quality standards.

**PM**

Particulate matter.

**PPM**

Parts per million.

**RACT**

Reasonably Available Control Technology. A relatively non-stringent EPA standard applied to existing HAP sources in areas that are not meeting national air quality standards.

**SSM**

Startup, shutdown and malfunction.

**SO<sub>2</sub>**

Sulfur dioxide.

**THC**

Total hydrocarbons.

**Title 5**

A Federal operating permit program, implemented by individual states, used to ensure that sources are being monitored by pollution control agencies and are complying with appropriate standards.

**TYP**

Tons per year. Refers to amount of a particular pollutant emitted.



## Scenario Planning Application Preloaded Decisions

### Action Triggers and Preloaded Decisions

It's a lot easier to make a decision if you've done some thinking about it beforehand. Yet life often seems to come at us so fast we feel there is no time to do that valuable "pre-thinking." The good news: scenario planning makes it possible to cut through the noise and work smarter, not just harder.

Whenever you make an advance decision to execute a certain action when you encounter a certain situation, you're making use of two powerful concepts: "action triggers" and "preloaded decisions."<sup>1</sup> An effective action trigger is specific and visible, acting as a red flag: *"oh yeah, I decided that if X happens, I will do Y."*

### Recognizing Leading Indicators

Preloaded decisions are an outcome of scenario planning, which is an approach to predicting possible futures and deciding the best actions to take depending on what actually happens.

For each scenario developed, early warning signs are identified.<sup>2</sup> Like action triggers, these are specific, visible indicators that get our attention so we can make preloaded decisions thought out carefully in advance. By keeping one eye peeled toward these critical signs, it's possible to recognize that a particular scenario is beginning to unfold, and take appropriate action in response.

### Preventing Guesswork

Preloading decisions using action triggers identified during scenario planning takes a lot of the guesswork out of important actions that have long-term implications. This approach reduces decision paralysis, increases confidence and prevents knee-jerk responses to change.

1. [Switch](#) by Chip Heath and Dan Heath, pages 209-212.
2. ["How to Build Scenarios"](#) by Lawrence Wilkinson.  
<http://www.ptv-agc.org/RRM-HowToBuildScen1.pdf>