# **Wind Concepts Learning System**

950-WC1





# **Learning Topics:**

- Wind Power Systems
- Utility-Scale Wind Power Systems
- Small Wind Power Systems
- Wind Power Industry
- Wind Turbine Aerodynamics
- Wind Power Characteristics
- Wind Turbine Ratings
- Wind Turbine Capacity and Availability
- Wind Resources
- Wind Resource Measurement
- Wind Plant Sitting
- Wind Plant Economics

Wind energy is a significant source of power that is growing dramatically. The Department of Energy has set a goal for 20% of electrical energy used in the United States to be from wind power by 2030. Wind farms can be found throughout the world – from cold, arctic conditions to the tropics; from beaches to mountains to oceans. Understanding the basics of how wind energy is harnessed will prepare technicians, engineers, installers, designers, builders, and others that want to utilize wind technology in either large utility-scale turbine farms or small wind applications.

Amatrol's Wind Concepts Learning System (950-WC1) introduces learners to a broad range of basic concepts in wind energy technology. Learners study how wind power systems work and what it takes to generate electrical power with wind. Wind Concepts acts as a foundation for learners enrolled in wind-specific as well as general renewable energy programs. Wind Concepts includes student curriculum in a PC-based, interactive format, as well as an instructor's assessment guide.



### **Technical Data**

Complete technical specifications available upon request.

### Student Curriculum (M20011)

PC-Based Multimedia

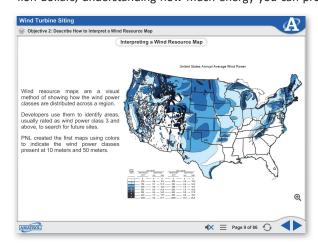
Includes (3) interactive multimedia curriculum modules covering wind power systems, utility-scale wind power small wind power systems, wind power industry, wind turbine aerodynamics, wind power characteristics, wind turbine ratings, wind turbine capacity and availability, wind resources, wind resource measurement, wind plant sitting, wind plant economics

Instructor's Guide (C20011) Student Reference Guide (H20011) Additional Requirements:

For PC requirements, see http://www.amatrol.com/ support/computer-requirements

# **Using Wind Technology to Capture Wind Energy**

Siting a wind farm or turbine is important. With utility-scale wind turbines costing several million dollars, understanding how much energy you can produce from the turbine in a specific



location is key. The amount of wind available at different heights varies tremendously, and is shown in courses utilizing maps, like the one shown to the left. In the 950-WC1, learners gain knowledge and skills in applying science and mathematical skills. Additionally, Amatrol's Wind Concepts teaches students about many of the factors involved in the critical turbine siting decision.

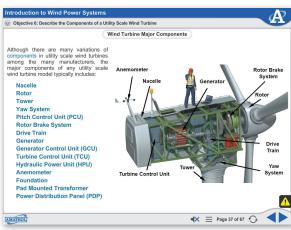
# The Many Types of Wind Power Systems

Wind power is harnessed by a broad array of wind power systems. The most striking difference is between residential or small wind and utility-scale turbines. While each have their place in the energy landscape, they are very different in both application and design. Understanding the fundamentals of these various systems and how they are used is a good base from which to launch a strong knowledge of wind power. Amatrol's 950-WC1 Wind Concepts teaches learners about the range of wind power systems and how they are applied.

### **Interactive, High-Engaging Multimedia**

Amatrol's unmatched multimedia provides an engaging, stimulating experience for learners. The 950-WC1 Wind Concepts Learning System consists of text, audio, and stunning 3D anima-

tions that engage students in both theoretical knowledge and handson skills. This thorough, exceptionally detailed curriculum is built to begin with the basics, and steadily advance to more complex concepts and skills. Through partnerships with key industry leaders and leading-edge educators, Amatrol developed the perfect balance of knowledge and applied skills needed to train learners to work in their chosen field.



Screenshot of Interactive Multimedia Curriculum

# Wind Concepts Student Reference Concepts Student Reference Concepts Student Reference Concepts Conc

### **Student Reference Guide**

A sample copy of this course's Student Reference Guide is included with the learning system. Sourced from the multimedia curriculum, the Student Reference Guide takes the entire series' technical content contained in the learning objectives and combines them into one perfect-bound book. Student Reference Guides supplement this course by providing a condensed, inexpensive reference tool that learners will find invaluable once they finish their training, making it the perfect course takeaway.

