Discussion Guide
Understanding Renewable Energy
Energy and You

Presenter: Peter Mukoma, Demand Response and Energy Efficiency Manager, South Africa’s Council for Scientific and Industrial Research (CSIR)

Lesson Description
Utility companies play a large role in defining the renewable energy field, but you as a consumer also play a large role in both energy production and consumption. What are ways that you can reduce your energy usage every day and what impact will it make on the world? In this lesson, we will offer ways that individuals can help their communities and countries move to renewable energy sources and also look at specific measures that individuals can take to reduce their energy demand and be more efficient consumers.

Lesson Overview
1. Examine how individuals can help their communities and countries move to renewable energy.
2. Review the ways individuals can reduce their energy demand.

Discussion Questions
1. What is the relationship between distributed generation and net metering? How can distributed generation benefit a utility company? What do you think utility companies can do to make renewable energy solutions accessible to more people?
2. What appliances and electronics in your house do you think use the most energy? Which ones use the least? Discuss why you think there are differences and what you can do to help reduce the strain.
3. Besides choosing more efficient appliances and electronics, what are other ways that you can help to modify your energy demands? What role do you think individuals play in the broader picture of renewable energy?

Developmental Actions
1. Perform an eco-audit on your house to discover how much energy you’re using.
2. Identify at least three things you intend to do to reduce your energy consumption and electric bills.
3. Create a competition in your community to see who can lower their electric bills the most by using energy-saving measures.

About the Presenter
Peter Mukoma is the Demand Response and Energy Efficiency Manager at the Council for Scientific and Industrial Research (CSIR) Energy Centre in South Africa where he is responsible for developing infrastructure and systems for implementing Demand Response and Energy Efficiency measures to balance supply and demand within the CSIR campus in Pretoria as part of the Energy Autonomous Campus Programme, developing infrastructure and systems for demonstrating various Hydrogen-based energy storage technologies as a way of coupling the electricity sector with the transport and chemical sectors, and Integrating Electric Vehicles in the Demand Response programme of the Energy Autonomous Campus. Prior to working at CSIR, he held positions at Foster Wheeler South Africa (Pty) Ltd and the University of South Africa (UNISA) in South Africa as well as at INVECO EXIDE BATTERIES LTD in Zambia. In 2013, Peter jointly won the 2013 Eskom Eta Award in the category of Energy Efficiency Awareness.