Introduction to energy statistics and energy accounts

(e-Learning course)

3 October -18 November 2022

Guideline

I. OVERVIEW OF THE COURSE

Energy is an important input in the production of goods, including food, and is used by households for transportation and heating. Given its importance to wellbeing, managing energy resources and energy supply and use are areas of priority in many countries. In order to support the development and implementation of energy related policies for improved wellbeing, it is helpful to have integrated information and data on energy.

This course will focus on energy statistics and accounts, as well as some important energy aggregates and indicators (including SDGs). The energy accounts are based on the System for Environmental-Economic Accounting-Energy (SEEA-Energy) which is a multi-purpose conceptual framework for organizing energy-related statistics. It supports analysis of the role of energy within the economy, the state of energy inputs and various energy-related transactions of environmental interest. It is fully consistent with the SEEA Central Framework and follow a similar accounting structure to the System of National Accounts (SNA). By doing so, the SEEA-Energy allows us to develop indicators and conduct analysis on the economy-environment nexus, with a focus on energy.

II. TARGET PARTICIPANTS

The target audience are officials in national statistical offices, line ministries (especially ministries of energy, natural resources and environment) and other institutions who are working on energy related issues. The course can also be useful to a wider audience who is interested to learn more about energy information. Please note that UN SIAP conducted the same course in 2021; participants from the 2021 course are welcomed to join this course as a review of the topic.

III. LEARNING OUTCOMES

By the end of the course, participants will be expected to:

- learn the basic concepts, definitions and classifications used in energy statistics and accounts
- understand the conceptual framework used for energy accounts

- understand how energy data contributes to developing sustainable energy policies

IV.   COURSE DESIGN AND CONTENT

Each module consists of slides with explanations. After all modules have been completed, participants will be required to complete a final test that will cover all modules. The modules are expected to take a maximum of 6 hours to complete. Participants are also expected to attend course webinars. The webinars will provide an overview of the course topics and allow for participants to ask questions. Furthermore, participants are encouraged to actively participate in the online forum of the course. Topics for discussion will be posted on a regular basis and participants are invited to share their views/comments/questions.

Outline

Module	Coverage
1. **Introduction to the SEEA Central Framework and SEEA-Energy**	• How are SEEA-Energy and other information systems related? • Types of information in SEEA-Energy • Advantages and policy relevance of SEEA-Energy • Main types of accounts in SEEA-Energy • How can we build on existing energy information? • How are various accounts related? • Flexibility in implementation
2. **Definitions and accounting structure**	• The scope of SEEA-Energy • Residence vs. territory principle • Production, consumption and accumulation • Types of physical flows related to energy • Transformation of energy • Classification of industries, products and use • Physical and monetary units • Energy assets • Other energy-related stocks and flows • Main types of SEEA-Energy accounts and tables
3. **Physical supply and use**	• Physical flow accounts for energy • Structure of the PSUT for energy • Flows of natural inputs • Flows within the economy • Flows to the environment • Following the flows: Supply equals use

4. **Asset accounting**	• Physical assets in SEEA and SNA • Scope of the physical asset accounts • Classes of viability • Categorization of quantity and quality • Quantification of stocks of energy resources • Inventories of energy products • Valuation and the NPV approach
5. **Basic statistics and energy balances**	• Energy statistics, energy accounts and energy balances • From basic energy statistics to energy balances • Structure of energy balances • From energy balances to energy accounts • Bridge tables linking energy balances and energy accounts • Differences in terminology • Comparison of energy statistics, balances and accounts
6. **Practical guidance**	• Policy demands and indicators • Legal framework • Institutional Arrangements • First steps toward implementation • The Generic Statistical Business Process Model • Implementation of PSUT • Implementation of asset accounts • Dissemination and supporting materials

## V.	EVALUATION

Participants must receive a 70% or higher in the test at the end of this course.

Participants will be given 60 minutes to complete the test. They may take the exam up to three times and retain their best score. Participants may not work together on the test. The course facilitator reserves the right to deny course certificates to participants suspected of cheating on the test. The supervisor is expected to ensure that the test of the course is taken in his/her presence.

## VI.	FOLLOW-UP PHASE

Following the completion of the training and depending on resource availability, in-kind support will be made available to countries interested in compiling energy statistics, accounts and indicators. Further details on the follow-up phase will be provided during the course.

## VII.	SOURCE MATERIAL

This course draws upon various sources, including international statistical standards and case studies from national statistical offices.