

QUESTIONS TO ACTIVATE RELATED KNOWLEDGE

- What is the development role of access to electricity?
- What is the development role of access to modern and affordable energy?
- Which are the main energy sources used to generate electricity (list three?)
- Which is the likely lowest overall cost electrification option for low income population settlements?
- Which is the likely lowest overall cost electrification option population in remote areas?
- Which is the likely lowest cost electrification option for low income population in urban areas?

ELECTRICITY FOR ALL

- What explains that access to electricity has been hitherto provided by centralized grid infrastructure?
- What are the main differences between access to electricity and affordability and reliability of electricity services?
- Electricity is a key enabler for socio-economic development. List three other aspects of the 2030 Agenda that are linked to the achievement of SDG 7.

ENERGY RESOURCES ASSESSMENT USING GIS

- How can the increased availability of Geographical Information Systems contribute to energy planning and analysis?
- Can we say that Africa should primarily use one or another source of energy?
- Which sources of energy can you name as the most advantageous for African countries? Name three and explain.

ELECTRIFICATION ANALYSIS USING GIS

- Which data are needed to identify future spatial electricity demand?
- Why modelling needs to define levels of electricity consumption?
- How can the definition of levels of electricity consumption be made more useful for national planning?
- What costs are considered in the levelised cost of generating electricity?
- Besides various cost components, what else is accounted for when estimating the levelised cost of generating electricity?

ONSSET – OPEN SOURCE SPATIAL ELECTRIFICATION TOOL

- What is the objective of the Open Source Electrification Tool?
- Which is the indicator used in ONSSET to select the lowest cost electrification technology?
- How is the future electricity consumption considered in ONSSET?
- Why is it important to harmonize GIS data and data from national statistics?

RESULTS FROM THE ONSSET ELECTRIFICATION TOOL

- Provide two important factors considered in ONSSET determining the technology of choice. Why are these factors essential for electricity planning?
- What is the role of renewable energy sources in off grid electrification? How does an increased diesel price affect the optimal electrification technology?
- Explain the reason why increasing electricity demand (Tier 1 → Tier 5) moves gradually the least cost option from Standalone to Mini-Grid and then to Grid.