

Sree Sankara College, Kalady

CERTIFICATE PROGRAM ON ENERGY AUDIT IN BUILDING SECTOR:

Approved by UGC and NSQF, authorised by MG University

Prospective Job positions would be:

- **Audit Assistance,**
- **Energy Analyst,**
- **Energy Training,**

With energy audit companies

Skill Trainings provided:

The sector opens large opportunities. The students are trained for preparing them to perform tasks of the energy auditing discipline. A few of them are:

- Identify and prioritize energy saving measures.
- Identify opportunities to improve operational efficiency
- Collect and analyse field data related to energy usage.
- Research issues related to environment or sustainable business practices.
- Inspect facilities or equipment to ensure specifications are met.

Brief description of the proposed programme:

Introduction

The building sector represents a significant cost-effective Energy Efficiency opportunity due to its potential to activate local value chains. Energy Efficiency opportunities in new and existing buildings can be split into two categories – New building programmes and Upgrade Programmes for existing buildings. Post Covid-19 India may focus on energy efficient buildings including retrofits, technology replacement, adoption of energy efficient appliances etc to create more jobs. Around 60% of the expenditure on such retrofits goes towards labour sector, delivering strong employment growth, according to the International Energy Agency (IEA)

In the times of the Covid-19 crisis, we cannot expect that the Government would put in large investment, due to its spending on containing the outbreak. However, it is reasonable to assume that energy efficiency measures would be facilitated so that demand can be created in the market and employment opportunities can be generated in the energy sector. To cite an example, the National Street Lighting program launched by Energy Efficiency Services Limited (EESL) helped in generating around 13,000 jobs in the sector. That experience can be replicated in other areas including smart grids, meters and infrastructure in the country.

Why 'Energy Audit in Building Sector' ?

Energy sector is one of the basic infrastructure sectors. Energy demand in agriculture, industrial, commercial and household sectors has increased tremendously and placed enormous pressure on its resources. The depleting resources and increasing pollution of environment due to energy use has necessitated optimum use of its resources; which in turn requires proper energy planning to achieve energy security.

Energy consumption and production activities contribute two-thirds of global greenhouse gas (GHG) emissions. As such, energy also has the greatest potential to help slow GHG-driven climate change, by accelerating the pace of innovation and large-scale deployment of sustainable energy technologies.

Energy audit studies in buildings have shown large potential for energy savings both in government and commercial office buildings. Study of the available data has shown that there is an urgent need for improved energy efficiency of buildings.

Star ratings of Electrical equipments, Energy Performance Index (EPI) in kWh / sqm/ year considered in rating a building etc are the audit objectives of various energy efficiency programmes initiated by agencies. Therefore, there exists immense opportunities for qualified personnel to choose a promising career.

Employment Generation

There exist job markets within and outside the country having clear energy audit job descriptions in the industries. Post Covid 19, India raises the 'vocal for local' slogan as far as manufacturing is considered. Financial packages are also announced for restructuring the small industries. Therefore, more growth centres are going to get added to the manufacturing sector in the near future. These are the drivers of the energy audit market anticipated.

Renewable Energy is also taking the centre stage in the energy ecosystem. This segment focuses on adoption of green energy into the network. Therefore, this can be considered as a major opportunity of energy audit ambitions.

Kochi is the industrial nerve centre of Kerala. The Head Quarters of Kerala State Productivity Council is also located here. Presence of large number of industries and availability of resource persons on the energy efficiency domain are the two major influences in short listing 'Energy Audit' as the add-on subject for undergraduates in Physics stream.

The energy audit discipline is a multi-disciplinary function. Physics students, who are learning instrumentation, robotics, artificial intelligence and other emerging tools in control and monitor of energy is expected to get a top up with an exposure to the industry and the industry experts. The course is designed with case studies and mock audits to supplement the learning from the subject.

Energy Efficiency Services Limited (EESL) is the organ under Ministry of Power to create models to inculcate energy efficiency among the energy users. State Nodal Agency for EESL is Energy Management Centre (EMC). The State run EMC is planning to place Energy Auditors across all the 140 Legislative constituencies in Kerala. EMC aims to conduct periodic audits and verification / compliance of energy conservation in buildings. The auditor's services are also foreseen for ensuring compliance of applicable building rules to deploy environment friendly sources of energy. Capturing the carbon foot-print of every Government as well as Non-Governmental institutions are also in the agenda. These activities are going to create employment opportunities in the urban and rural areas of the state.

About the proposed training partner <http://www.mithradham.com/>

Renewable Energy Centre, Mithradham in Kochi is the first fully renewable energy powered educational institution in India, dedicated solely for the promotion of environment and energy. The centre was established in 1996. The centre is autonomous in energy, food and management of waste. Mithradham is SETNET partner for NISE training programmes under MNRE and ANERT.

The institute already shares relation with Sree Sankara College by deputing visiting faculties for the B Voc (RE) program run by the college. Other support services by Mithradham includes curriculum preparation, job placement for students, arranging field visits and project works.
