

# Small working group bridges the gaps in implementing energy efficiency projects

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An expert providing hands-on training on energy auditing to the Small Energy Efficiency Working Group (SEEWG) of a garment industry.

“If I were emperor of the world, I would put the pedal to the floor on energy efficiency and conservation for the next decade,” said American Physicist and Nobel Laureate, Steven Chu. On the other hand, energy efficiency is denoted as the first fuel by the International Energy Agency (IEA) and is getting increasing attention all over the world imputed to its multitude of benefits, including the ones that would help contribute to the global race to net zero emission by the mid-century.

Energy efficiency improvement in Bangladesh, however, is important for several other reasons. For instance, the garment and textile industries of Bangladesh contribute 11.2% of GDP and 83% of the country’s export earnings [1,2]. As the country is on course to graduate to a developing country in 2026, it would be exposed to the increasing competition in global apparel market [3]. Among other things, the decoupling of sectoral growth from energy consumption and inclusion of renewable energy, and thus enhancing

competitiveness would be key to hold the country’s position in the international apparel market.

Implementation of energy efficiency measures in the sector is also highly expedient as it consumes roughly 3,740 kiloton oil equivalent (KTOE), i.e., one third of the primary energy demand of the industries. The sector represents the energy efficiency & conservation potential of 1,159 KTOE (31%) with the investment requirement in the order of USD 1.6 billion [4, 5].

Nevertheless, the energy efficiency projects face different hurdles on the road. Studies reveal the lack of incentive, awareness, technical capacity, access to finance with information barrier and perceived risks as the major constraints that affect the execution of viable energy efficiency projects [6, 7, 8]. However, a multi-country project undertaken during 2020 by GIZ within the framework of its sector network, TUEWAS identifies that several internal challenges/gaps of industrial enterprises often impede the implementation

of energy efficiency projects. The lack of leadership to implement energy efficiency measures, capacity gap, absence of communication/common understanding among different departments are some major internal challenges. Since energy efficiency project implementation at times warrants large capital investment, keeping industry management informed from the outset is necessary.

Against these backdrops, a new model of small energy efficiency working group (SEEWG) was conceptualised and piloted in 12 enterprises of four countries (Bangladesh, India, Nepal, and Vietnam) from August to November 2020 by the GIZ energy programme of respective countries.

## Central idea

The central idea of the model is to form a SEEWG in each enterprise, combining staff from technical, finance, planning, procurement, and administration, coordinated by one of the SEEWG members. In Bangladesh, the SEEWG model has been piloted in three garment/textile industries by the Renewable Energy and Energy Efficiency Programme (REEEP II) of GIZ, in



Small Energy efficiency working group (SEEWG) engages staff from technical, finance, management, planning and procurement disciplines of an industry.

Credit: GIZ

collaboration with the Bangladesh Garment Manufacturers and Exporters Association (BGMEA) and the Sustainable and Renewable Energy Development Authority (SREDA).

Several capacity development trainings have been conducted for the SEEWGs on energy auditing, economic analysis, preparing energy efficiency action plans and presenting results to their top managements. Supported by experts, the SEEWGs have carried out energy audits and economic analysis of energy saving opportunities and gathered hands-on experience. Since the nature of energy efficiency projects demand the engagement of different disciplines of an industry, sessions have been organised for the SEEWGs to facilitate an interdisciplinary exchange of ideas to take place among different members. Finally, the SEEWGs have prepared energy efficiency action plans and presented the results to their top managements [9].

Data monitored by the industries reveal that they have so far achieved around 5% energy efficiency as a result of the implementation of some low hanging fruits. Another 10 to 12% energy efficiency is expected once they implement the remaining energy saving measures identified through this programme. The average pay-back period of the energy efficiency measures is approximately three years.

### Continuous improvement

In essence, the SEEWGs will enable the three garment/textile industries of Bangladesh to spearhead continuous improvement on an energy efficiency front. Raising awareness and stimulating behavioural changes within the industries to contain energy wastage could also be led by the SEEWGs. They could take up renewable energy projects to minimise average energy bills of the industries. In addition, the internal expertise makes the industries more self-dependent rather than investing in external technical resources.

While the conventional approach is to develop the capacity of the staff, the SEEWG model involves capacity development of a group, minimising the risk of getting stuck in an energy



Experts providing technical training on energy auditing and economic analysis to the Small Energy Efficiency Working Group (SEEWG) of a garment industry in Bangladesh.

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efficiency project in the event of employee turnover. If a member of the SEEWG leaves, the institutional knowledge and capacity will still remain in the other members.

Overall, the concept is easy to implement within a short span of time and could be replicated among other garment and textile industries in Bangladesh and thus could help them remain internationally competitive in the foreseeable future. The SEEWG model could further be adopted in other industrial sectors of the country to advance energy efficiency and conservation measures to enhance productivity and reduce energy cost. As Bangladesh is approaching universal access to electricity within this year, the time is now ripe to concentrate on energy efficiency and conservation.

### References:

1. ADB. (2020). *Covid-19 and the ready-made garments industry in Bangladesh*.
2. BGMEA. (2021). *Export Performance*. Retrieved 27 May 2021, from [https://www.bgmea.com.bd/page/Export\\_Performance](https://www.bgmea.com.bd/page/Export_Performance)
3. *The Financial Express Bangladesh*. (2021). *LDC graduation and after*. Retrieved 27 May 2021, from <https://www.thefinancialexpress.com.bd/views/views/lde-graduation-and-after-1614784580>
4. SREDA. (2016). *Energy Efficiency and Conservation Master Plan up to 2030*.
5. IDCOL. (2019). *Energy Efficiency Market Outlook for Bangladesh*.
6. Tetra Tech Es, Inc. 2014. *Industrial Energy Efficiency Opportunities and Challenges in Bangladesh – Final Report*.
7. UNEP. 2006. *Barriers to Energy Efficiency in Industry in Asia – Review and Policy Guidance*.
8. Alam, Shafiqul. (2016). *In Support of a Market Mechanism for Energy Efficiency to Address Energy Trilemma: Bangladesh Context*. *World Energy Congress 2016*.
9. BGMEA. (2019). *Working groups present energy efficiency action plan to garment industry management under GIZ's initiative in collaboration with BGMEA and SREDA*. Retrieved 27 May 2021, from [https://www.bgmea.com.bd/page/Working\\_groups\\_present\\_energy\\_efficiency\\_action\\_plan\\_to\\_garment\\_industry\\_management\\_under\\_GIZ%E2%80%99s\\_initiative\\_in\\_collaboration\\_with\\_BGMEA\\_and\\_SREDA](https://www.bgmea.com.bd/page/Working_groups_present_energy_efficiency_action_plan_to_garment_industry_management_under_GIZ%E2%80%99s_initiative_in_collaboration_with_BGMEA_and_SREDA)