



# Stakeholder Consultation On Smart Readiness Indicator (SRI)

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Proceedings



EU – India  
Clean Energy & Climate Partnership

## Stakeholder consultation on “Smart Readiness Indicator (SRI)”

On 05<sup>th</sup> May 2022, the Delegation of the European Union to India organised a stakeholder consultation workshop on ‘Smart Readiness Indicator (SRI)’. The workshop was organised under the EU-India Clean Energy and Climate Partnership (CECP) ([www.cecp-eu.in](http://www.cecp-eu.in) and @EU\_India\_CECP). PricewaterhouseCoopers Private Limited together with the Bureau of Energy Efficiency (BEE) were the implementing partners for this project. The workshop was attended by technology providers/manufacturers, architects, building developers and consumers.

### Welcome Address

**Mr. Gopal Nurani Parasu**, Manager at PwC India, extended a warm welcome to all the participants and invited the panellists to deliver the opening remarks.

### Opening Remarks

**Mr. Edwin Koekkoek**, First Counsellor, Energy & Climate Action, Delegation of European Union to India, delivered the opening remarks:

- An introduction on EU-India Clean Energy and Climate Partnership (CECP) project was given which is focused on deployment of climate friendly energy sources in the areas of energy efficiency, renewable energy, smart grids, storage, sustainable finance, and climate mitigation and adaptation between EU and India.
- Under this project, EU has been jointly working with Ministry of Power (MOP) and Ministry of Environment, Forest and Climate Change (MoEF & CC) in India.
- Energy efficiency is one of the most primary requirements for clean energy transition. Building sector has significant energy consumption and is expected to increase in future.
- Based on the technical study done on “Smart Readiness Indicator (SRI)” in Europe, a feasibility study on adoption of smart technologies in buildings in India was conducted and the findings of this study will be presented in the workshop.

**Mr. Saurabh Diddi**, Director, Bureau of Energy Efficiency (BEE), delivered the second opening remarks address:

- The area requirement for commercial and residential building sector is expected to be 3 billion sq.m and 1 billion sq.m by 2030 which is going to increase the energy consumption by significant amount.
- Adopting energy efficient interventions in building sector is the need of the hour in order to cater the high energy demand in future. SRI will help in making the building sector energy efficient and help the manufacturers, building developers, architects, and consumers.

**Mr. Rajeev Ralhan**, Executive Director, PwC India, delivered the final opening remarks address:

- A background of the work being done under this project with BEE was explained such as net zero tourist locations, adoption of smart technologies in buildings etc.
- A feasibility report on adoption of smart technologies for building sector in India has been prepared based on the learnings of SRI developed in Europe and stakeholder consultations with technology providers/manufacturers.
- The objective of this workshop is to seek feedback from the stakeholders on the findings of the report and develop a roadmap for adoption of smart technologies in buildings in India.

### Presentations

**Dr. Stijn Verbeke**, Senior R&D expert, VITO/Energyville, presented the framework and methodology adopted in Europe for adoption of Smart Readiness Indicator (SRI) in buildings.

**Mr. Gopal Np**, presented the findings on penetration of smart technologies in India across six technology domains – cooling, controlled ventilation, lighting, electricity, EV charging and monitoring & control. The most promising smart services for each domain was also determined based on the energy savings potential assessment done in Europe and the survey questionnaire.

**Mr. Rajeev Ralhan**, explained the current policy framework and how smart technologies can be integrated with it. The way forward for the adoption of SRI in India was also presented which included preparation of a methodology for rating a building for SRI, carrying out a study on the assessment and implementation options, implementation of pilot projects and conducting capacity buildings program among manufacturers and consumers to adoption of SRI assessment scheme.

## **Q & A Discussion**

**Following the presentations by VITO and PwC India, Mr. Rajeev Ralhan invited Mr. Sauabh Diddi and Mr. Edwin to share their feedback and start with the panel discussion.**

**Mr. Saurabh Diddi** acknowledged and appreciated the presentation. He raised three questions on the findings of the report developed on “Smart Readiness Indicator (SRI)” in India

- The current study seems to be limited to commercial buildings; can this be expanded to residential buildings?
- What kind of support is required from the government?
- How will the existing commercial buildings become smart?

**Mr. Edwin** acknowledged and appreciated the presentation.

- The report provides the assessment on the availability of smart technologies in India and its linkage with the policies.
- The objective behind the stakeholder consultation workshop is to understand if there is any interest from the building developer and consumer community and what is the short term and long-term cost associated with it.

## **Technology Provider perspective**

**Speaker 1: Mr. Robin Roy, Director – MCIS, Delta Electronics**

- A regulatory push will be required in adoption of the smart technologies in buildings.
- There is a need to incentivize the adoption of these technologies from the consumer perspective.
- As there are more new technology providers in the smart technologies segment, there is a risk for them which requires proven track record to get established in Indian market which needs to be addressed.
- India being a price intensive market, it has very high capex and low opex for these smart technologies.

**Speaker 2: Praveen Rathore, Manager, Eaton**

- In addition to the smart technologies being considered in the study, there should be a focus on distribution losses inside the building which will be beneficial for the SRI framework in India.

## **Discussion**

**Mr. Himanshu Gupta, General Manager – North India, Swegon**

- Swegon offers services in the domains of cooling, heating, and domestic hot water.

- Although cooling services are in an advanced stage in India, smartness in heating and domestic hot water should be tested by adopting the technologies which are energy efficient as heating is either diesel fired or done using electric heater.

**Mr. Diddi to Mr. Gupta:** What are the latest technologies coming up in the domestic hot water domain?

**Mr. Gupta to Mr. Diddi:** Currently there are technology coming up catering to 1 lakh litre capacity for commercial buildings and heat pumps for residential applications.

**Mr. Diddi:** How will the SRI catalogue get updated when there are new technologies coming up in future?

**Dr. Stijn:** SRI has been made in a way to update as and when there are new technologies in the market. This is the reason why weighting scores have been allocated for each impact criteria and technology domain. A stakeholder consultation is ongoing to decide the duration after which the SRI catalogue should get updated.

Regarding the internal distribution losses concern as raised by Mr. Rathore, the losses due to cables in building are not being evaluated in the SRI framework developed in Europe but there is a provision for monitoring distribution losses in EV charging.

**Mr. Edwin to Dr. Stijn:** What's your opinion on the requirement of proven track record for the technology providers from Europe's perspective?

**Dr. Stijn:** There has been a strong push in the market for the adoption of these technologies not from the regulators but from building developers, consumers and technology providers/manufacturers.

**Mr. Robin Roy:** How the SRI framework will be developed in India?

**Mr. Saurabh Diddi:** The technical study in Europe has been considered for reference. The SRI framework will be developed according to the needs and conditions of India like the development of standard labelling programme for the appliances in the past.

**Dr. Stijn:** The initial technical studies were looked at and the current catalogue was developed based on the standards on building automation & control systems which helped in determining the energy efficiency scores. When expanded to other services, the impact categories other than energy savings were added which were not according to European standards. The standards are currently being investigated and the SRI catalogue will get updated accordingly.

**Mr. Sahil Sarna, Manager, Siemens:** In the SRI framework, do we focus on health and lifecycle of the assets in the building?

**Mr. Diddi:** Lifecycle of the asset is a very important aspect and should be included but currently there is a lot of uncertainty from manufacturer's perspective.

**Mr. Sahil Sarna:** As the current SRI framework focusses on demand side, are we going to focus on integrating smart technologies in the supply side in future?

**Mr. Diddi:** The work on integrating smart features on generation side is going on but not with SRI as it focuses only on optimizing the energy use of building.

**Dr. Stijn:** Based on stakeholder consultation, there was an issue with existing policies such as Energy performance certificate, so the generation side of the building was not investigated. Although through SRI, building technologies are able to control locally available generation in buildings.

**Mr. Edwin:** In the SRI framework, smart technologies can be introduced for the diesel generators and air purifiers for India.

**Mr. Susheel Chopra, General Manager, Johnson Controls - Hitachi:**

- For telecom sector, Johnson Controls - Hitachi has limited the temperature settings of air conditioners for more than 400,000 sites. In addition to that, another intervention has been installed where the coil doesn't get heated up which leads to lot of power savings.
- The betterment of smart grids can lead to enhancement of energy efficiency.
- There is an ongoing project A2W which is in pilot stage where the condenser capacity is expected to go down from 190L to 140 L.

**Mr. Bhupesh Balakrishnan, Head - Product Management & Market Services, Blue Star India:**

What are the attributes that has been considered from consumers' perspective in adoption of these technologies with respect to the investments they are making?

**Dr. Stijn:** In Europe the objective was to follow a cheap and simple approach like to go for Energy Performance Certificate in limited time and then aim for a large rollout. SRI is a starting point from the perspective of energy savings, payback time and quantified savings. The research on transition from design to operational stage is still ongoing in Europe.

**Mr. Mukesh Choudhry, Senior Manager, Daikin India:**

What has been the adoption rate of SRI in Europe from 2016 to 2020?

**Dr. Stijn:** Currently, 4 EU member states have adopted SRI which is still in the pilot stage. These technologies have tested in 500 buildings.

**Mr. Diddi to Dr. Stijn:** What is the next step with the assessment done with the data received from these 500 buildings?

**Dr. Stijn:** Some buildings were tested in an early stage which helped in fine tuning the SRI catalogue like new smart services were added. It was also used test to check whether this catalogue can be used in different typologies of the residential and commercial buildings. For the member states, it has helped in development of design certificates and training programme for assessors.

**Building Developer Perspective:**

**Nilabh (NAREDCO)**

- NAREDCO supports the SRI initiative as it focusses on green building technologies and sustainability.
- NAREDCO has signed an MoU with Tata Power for installing 5000 EV charging points in the state of Maharashtra in India.

**Closing Remarks**

**Mr. Gopal Np** thanked all the stakeholders who joined physically and virtually for their participation in the workshop. He summarized the key points discussed:

- The SRI framework should look into in the residential buildings and applicability in existing commercial buildings.

- The feedback from the building developers and consumers needs to be captured with a separate stakeholder consultation.
- As India is a price sensitive market, the costing from the manufacturers and consumers perspective should be investigated.
- The internal distribution losses in the buildings should be considered in optimizing the energy use.
- The smartness of microgrid is also an important aspect which needs to be investigated in order to enhance energy efficiency for buildings.

**Mr. Diddi** thanked all the stakeholders for this fruitful discussion. He mentioned that more stakeholder consultation workshops will happen in the development of SRI framework in India.