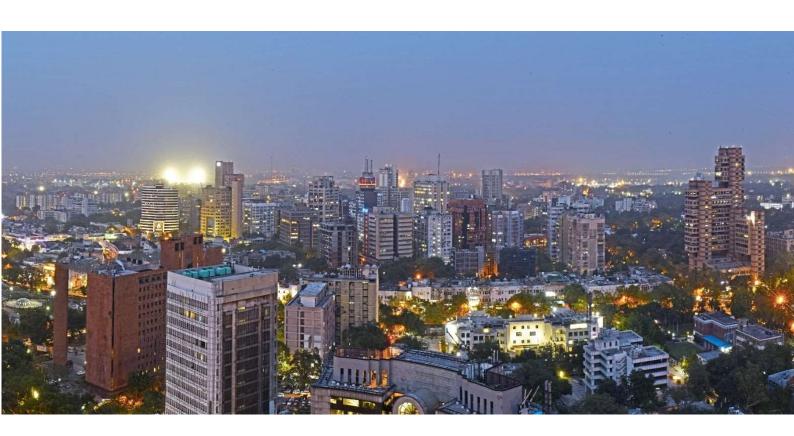


# **IEA Energy Efficiency in Emerging Economies**

Energy Efficiency Policy Training Week Programme



#### 11-14 December 2023

*India Habitat Centre (IHC)* Lodhi Road Near Airforce Bal Bharati School Lodhi Road, Lodhi Estate New Delhi, Delhi, 110003, India ¥#energyefficientworld

#### About the IEA

The International Energy Agency (IEA) works with policy makers and stakeholders to scale up action on energy to mitigate climate change, improve energy security and grow economies while delivering environmental and social benefits.

#### Energy Efficiency in Emerging Economies (E4) Programme

The IEA has supported governments of major emerging economies in advancing energy efficiency policies and programmes through the Energy Efficiency in Emerging Economies Programme (E4 Programme) since 2014. E4 works closely with six of the largest emerging economies - Brazil, China, India, Indonesia, Mexico and South Africa - as well as within regions, such as Southeast Asia, Latin America and Africa, accelerating energy efficiency.

#### How we work:

- *Policy development*: we support development of national strategies, targets, policies, regulations and monitoring systems.
- Research and analysis: we provide customised research and analysis to support and inform decision making of emerging economy officials responsible for energy efficiency policy.
- *Thematic workshops:* we bring together officials and experts from a range of countries to explore key topics and generate practical, locally-applicable solutions.
- Capacity building: we provide training for officials and future leaders, primarily through the E4 Training Weeks and a series of online, self-paced courses.

The first phase of the E4 Programme (2014 to 2017) was made possible thanks to the generous contributions of the Government of Denmark and the European Commission.

The second phase of the programme (commenced in 2018), is part of the IEA Clean Energy Transitions Programme (CETP), which aims to collaborate with partner country governments on all aspects of their clean energy transitions with support from a range of donors including Canada, Denmark, the European Commission, Germany, Italy, Japan, Sweden, Switzerland, and the United Kingdom.

## Plenary Session: Energy Efficiency Cross-Sectoral Themes

VENUE: SILVER OAK - INDIA HABITAT CENTRE (IHC)	– New Delhi, Delhi 110003, India
9:00 – 10:00	Participant Registration - Welcome Coffee and Tea
10:00 - 10:05	LAMP LIGHTING CEREMONY
10:05-10:25	OPENING SEGMENT  Opening Remarks: Ms. Melanie Slade, Senior Programme Manager E4, International Energy Agency Welcome Remark: Shri Arijit Sengupta, Director, Bureau of Energy Efficiency, Government of India Special Address: Shri Vishal Kapoor, CEO, Energy Efficiency Services Limited Keynote Address: Shri Abhay Bakre, Director General, Bureau of Energy Efficiency, Government of India Inaugural Address: Shri Pankaj Agarwal, Secretary, Ministry of Power, Government of India
10:25 – 11:00	PANEL: ROLE OF ENERGY EFFICIENCY IN DECARBONISATION  Moderator: Ms. Melanie Slade, Senior Programme Manager E4, International Energy Agency Panellists: Ms. Libby Green, Climate and Energy Lead, British High Commission Ms. Christine Egan, Executive Director and CEO, CLASP Ms. Reena Suri, Executive Director, India Smart Grid Forum Mr. Satish Kumar, Executive Director, Alliance for an Energy Efficient Economy Representative of the Government of Denmark
11:00-11:30	GROUP PHOTO
11:30 – 12:00	INDIA'S ENERGY EFFICIENCY POLICY LANDSCAPE Shri Arijit Sengupta, Director, Bureau of Energy Efficiency, Government of India
12:00 – 12:30	INTRODUCTION TO POLICY PACKAGES AND THE WEEK AHEAD Cornelia Schenk, Energy Efficiency Policy Analyst, International Energy Agency
13:00 – 14:00	Lunch

#### Energy Efficiency in Buildings

VENUE: SILVER OAK 2 - INDIA HABITAT CENTRE (IHC) – NEW DELHI, DELHI 110003, INDIA

Lead: Ksenia Petrichenko and Ian Hamilton

14:00 – 14:30	INTRODUCTORY GAME Speakers: Ksenia Petrichenko & Ian Hamilton
14:30 – 15:30	1. Where to Start: Energy use in buildings  Speakers: Ksenia Petrichenko & Ian Hamilton
15:30 – 16:00	Coffee and Tea Break
16:00 – 17:00	2. Where to start: Energy efficiency potential in buildings for net-zero Speakers: Ksenia Petrichenko & Ian Hamilton
17:00 – 18:00	3. TOOLKIT: ENERGY EFFICIENT BUILDING DESIGN Speaker: Ian Hamilton
18:00 – 21:00	Social activities followed by reception

### Energy Efficiency in Buildings

VENUE: SILVER OAK 2 - INDIA HABITAT CENTRE (IHC) – NEW DELHI, DELHI 110003, INDIA

Lead: Ksenia Petrichenko and Ian Hamilton

9:30 – 10:00	POEM COMPETITION, REVIEW, QUESTIONS
10:00 – 11:00	4. TOOLKIT: ENERGY EFFICIENT BUILDING TECHNOLOGIES
10.00	Speaker: Ian Hamilton
11:00 – 11:30	Coffee and Tea Break
11:30 – 12:00	TECHNOLOGIES GAME
12:30 – 13:00	5. TOOLKIT: ENERGY EFFICIENCY POLICY PACKAGE  Speaker: Ksenia Petrichenko
13:00 – 14:00	Lunch
14:00 – 15:45	5. TOOLKIT: ENERGY EFFICIENCY POLICY PACKAGE (CONT)  Speaker: Ksenia Petrichenko
14:45 – 15:30	6. SPECIAL SESSION: IMPLEMENTATION ON BUILDINGS CODES Guest Speaker: Pavankumar Parnandi, ASCI
15:30 – 16:00	Coffee and Tea Break
16:00 – 16:30	7. TOOLKIT: EFFICIENT GRID-INTERACTIVE BUILDINGS Speaker: Ksenia Petrichenko
16:30 – 17:30	8. SPECIAL SESSIONS: DEEP DIVE ON DIGITALISATION IN BUILDINGS Guest Speaker: Gurmeet Singh, Environmental Design Solutions Pvt. Ltd Guest Speaker: Arjun Gupta, Abhishek Chauhan, Smart Joules
17:30 – 18:00	ACTIVITY AND WRAP-UP OF THE DAY

#### Energy Efficiency in Buildings

VENUE: SILVER OAK 2 - INDIA HABITAT CENTRE (IHC) – NEW DELHI, DELHI 110003, INDIA

Lead: Ksenia Petrichenko and Ian Hamilton

9:30 – 10:30	9. MAKING IT HAPPEN: ENABLING INVESTMENT WITH ENERGY EFFICIENCY POLICIES  Speaker: Ian Hamilton
10:30 – 11:00	10. SPECIAL SESSIONS: FINANCING ENERGY EFFICIENCY IN BUILDINGS  Guest speaker: Somesh Kumar, Ernst & Young LLP
11:00 – 11:30	Coffee and Tea Break
11:30 – 12:20	11. DID IT WORK? EVALUATION AND ENERGY EFFICIENCY INDICATORS  Speaker: Ian Hamilton
12:20 – 13:00	12. SPECIAL SESSION: ENERGY EFFICIENCY BENCHMARKING  Guest Speakers: Satish Kumar, Akash Goenka, AEEE
13:00 – 14:00	Lunch
14:00 – 14:30	13. THE MULTIPLE BENEFITS OF ENERGY EFFICIENCY IN BUILDINGS  Speaker: Ian Hamilton
14:30 – 15:30	14. MAKING IT HAPPEN: NET-ZERO ROADMAP CREATION  Speaker: Ian Hamilton & Ksenia Petrichenko
15:30 – 16:00	Coffee and Tea Break
16:00 – 16:30	15. SPECIAL SESSION: DEEP DIVE ON ENERGY EFFICIENT BUILDINGS (TBC)  Guest Speaker: Kanagaraj Ganesan
16:30 – 17:00	16. Introduction to Minister's game
17:00 – 18:00	17. MINISTER'S GAME

#### Energy Efficiency of Appliances and Equipment

VENUE: MARIGOLD HALL - INDIA HABITAT CENTRE (IHC) – NEW DELHI, DELHI 110003, INDIA

Lead: Clara Camarasa and Melanie Slade

14:00 – 14:30	Introductory Roundtable
14:30 – 15:30	1. Where to start: the role of appliances in the road to net zero Melanie Slade, International Energy Agency
15:30 – 16:00	Coffee and Tea Break
16:00 – 17:00	2. TOOLKIT: APPLIANCE ENERGY EFFICIENCY POLICY OPTIONS Clara Camarasa, International Energy Agency
17:00 – 17:45	3. MAKING IT HAPPEN: ASSESSING CURRENT PERFORMANCE AND SETTING MEPS Clara Camarasa, International Energy Agency Guest Speaker: State level policy maker experience
17:45 – 18:00	GAME & GROUP EXERCISE (INTRODUCE EXERCISE AND GROUPS)
18:00 - 21:00	Social activities followed by reception

#### Energy Efficiency of Appliances and Equipment

VENUE: MARIGOLD HALL - INDIA HABITAT CENTRE (IHC) – NEW DELHI, DELHI 110003, INDIA

Lead: Clara Camarasa and Melanie Slade

9:30 – 10:00	REVIEW: EXERCISE AND LEARNINGS FROM DAY 1
10:00 – 11:00	4. MAKING IT HAPPEN: INSIGHTS INTO ENERGY LABELS Clara Camarasa and Melanie Slade, International Energy Agency Guest Speaker: H. Wadhwa, VOICE Consumer Body India
11:00 – 11:30	Coffee and Tea Break
11:30 – 13:00	5. MAKING IT HAPPEN: UNDERSTANDING THE MARKET: DATA NEEDS AND DATA-COLLECTION METHODS Clara Camarasa, International Energy Agency Guest Speaker: Tarun Garg RMI India Foundation
13:00 – 14:00	Lunch
14:00 – 15:30	6. MAKING IT HAPPEN: INDUSTRY TRANSFORMATION AND INCENTIVES  Melanie Slade, International Energy Agency  Guest Speaker: Abhishek Gupta EESL
15:30 – 16:00	Coffee and Tea Break
16:00 – 17:00	7. PANEL: STAKEHOLDER INVOLVEMENT AND COMMUNICATION  Panel: Abhishek Gupta (EESL), Ms Samal (BEE), Tarun Garg (RMI India Foundation), Neha Dhingra (CLASP India), State level government, H. Wadhwa, (VOICE Consumer Body India)
	Moderator: Melanie Slade.
17:00 – 18:00	GROUP EXERCISE

#### Energy Efficiency of Appliances and Equipment

VENUE: MARIGOLD HALL - INDIA HABITAT CENTRE (IHC) – NEW DELHI, DELHI 110003, INDIA

Lead: Clara Camarasa and Melanie Slade

9:30 – 10:00	REVIEW: EXERCISE AND LEARNINGS FROM DAY 2
10:00 – 11:00	8. MAKING IT HAPPEN: INTRODUCTION TO COMPLIANCE  Melanie Slade, International Energy Agency  Guest Speaker: Kishore Kumar, CLASP
11:00 – 12:00	Coffee and Tea Break
12:00 – 13:00	9. TOOLKIT: MODERNISING APPLIANCE ENERGY EFFICIENCY  Melanie Slade, International Energy Agency
13:00 – 14:00	Lunch
14:00 – 15:00	10. DID IT WORK? MONITORING AND EVALUATING POLICIES AND PROGRAMMES  Charles Michaelis, Strategy Development Solutions
15:00 – 15:30	GROUP EXERCISE
15:30 – 16:00	Coffee and Tea Break
16:00 – 17:30	GROUP EXERCISE AND PRESENTATIONS  Clara Camarasa and Melanie Slade, International Energy Agency
17:30 – 18:00	12. WHAT'S NEXT? Clara Camarasa and Melanie Slade, International Energy Agency

### Energy Efficiency in Industry

VENUE: SILVER OAK 1 - INDIA HABITAT CENTRE (IHC) – NEW DELHI, DELHI 110003, INDIA

LEAD: CORNELIA SCHENK AND PATRICK CRITTENDEN

14:00 – 14:30	Introductory Roundtable
14:30 – 15:30	1. WHERE TO START: MAKING THE CASE FOR INDUSTRIAL ENERGY EFFICIENCY POLICY Patrick Crittenden Guest Speaker: Mr. Ashok Kumar, Bureau of Energy Efficiency
15:30 – 16:00	Coffee and Tea Break
16:00 – 17:00	2. WHERE TO START: MAKING THE CASE FOR INDUSTRIAL ENERGY EFFICIENCY POLICY (CONT.) Patrick Crittenden Guest Speaker: Mr. Bhaskar Natarajan, Alliance for an Energy Efficient Economy
17:00 - 18:00	3. OVERVIEW OF ENERGY EFFICIENCY POLICY PACKAGES Patrick Crittenden and Cornelia Schenk
18:00-21:00	Social activities followed by reception

### Energy Efficiency in Industry

VENUE: SILVER OAK 1 - INDIA HABITAT CENTRE (IHC) – NEW DELHI, DELHI 110003, INDIA

LEAD: CORNELIA SCHENK AND PATRICK CRITTENDEN

9:30 - 10:00	REVIEW: WHAT WE LEARNED YESTERDAY AND QUESTIONS
10:00 – 11:00	4. ENERGY EFFICIENCY POLICY PACKAGES: REGULATION  Patrick Crittenden and Cornelia Schenk  Guest speaker: Mr. Gandla Sreenivasulu, Andhra Pradesh State Energy Conservation Mission
11:00 - 11:30	Coffee and Tea Break
11:30 – 13:00	5. ENERGY EFFICIENCY POLICY PACKAGES: INFORMATION Patrick Crittenden and Cornelia Schenk
13:00 – 14:00	Lunch
14:00 – 15:30	6. ENERGY EFFICIENCY POLICY PACKAGES: APPROACHES TO ENERGY MANAGEMENT SYSTEMS Patrick Crittenden and Cornelia Schenk
15:30 – 16:00	Coffee and Tea Break
16:00 – 17:00	7. UNDERSTANDING AND CONSULTING WITH STAKEHOLDERS Patrick Crittenden and Cornelia Schenk
17:00 – 18:00	8. ENERGY EFFICIENCY POLICY PACKAGE: ENABLING INVESTMENT THROUGH INCENTIVES  Patrick Crittenden and Cornelia Schenk

### Energy Efficiency in Industry

VENUE: SILVER OAK 1 - INDIA HABITAT CENTRE (IHC) – NEW DELHI, DELHI 110003, INDIA

LEAD: CORNELIA SCHENK AND PATRICK CRITTENDEN

9:30 – 10:00	REVIEW: WHAT WE LEARNED YESTERDAY AND QUESTIONS
10:00 – 11:00	9. SEIZING THE OPPORTUNITIES OF ELECTRIFICATION IN INDUSTRY Patrick Crittenden and Cornelia Schenk
11:00 – 11:30	Coffee and Tea Break
11:30 – 13:00	10. LEVERAGING DIGITAL TECHNOLOGIES  Patrick Crittenden and Cornelia Schenk  Guest Speaker: Confederation of Indian Industry (TBC)
13:00 – 14:00	Lunch
14:00 – 15:30	11. WHAT ARE THE STEPS? POLICY PACKAGE DESIGN EXERCISE  Patrick Crittenden and Cornelia Schenk
15:30 – 16:00	Coffee and Tea Break
16:00 – 17:00	12. DID IT WORK? INDICATORS, EVALUATION AND SCALING UP PROGRAMMES  Patrick Crittenden and Cornelia Schenk
17:00 – 18:00	13. REVIEW: ROUNDTABLE DISCUSSION ON APPLICATION CHALLENGES AND THE DEVELOPMENT OF ACTION PLANS Patrick Crittenden and Cornelia Schenk

### **Energy Efficiency Transport**

VENUE: MAPLE HALL - INDIA HABITAT CENTRE (IHC) – NEW DELHI, DELHI 110003, INDIA

Lead: Alison Pridmore and Ian Skinner

14:00–14:45	INTRODUCTORY ROUNDTABLE Alison Pridmore and Ian Skinner
14:45–15:30	1. Where to start: Energy use in Transport Alison Pridmore
15:30–16:00	Coffee and Tea Break
16:00–16:30	2. TOOLKIT: VEHICLE ENERGY EFFICIENCY POLICY PACKAGE  Alison Pridmore
16:30–17:30	3. MAKING IT HAPPEN: THE ROLE OF REGULATION AND FRAMEWORKS  Ian Skinner  Guest speaker: Mr Venkata Srinivas EESL, National Electric Bus Programme and E-bus challenge
17:30–18:00	GROUP EXERCISE
18:00–21:00	Social activities followed by reception

### Energy Efficiency in Transport,

VENUE: MAPLE HALL - INDIA HABITAT CENTRE (IHC) – NEW DELHI, DELHI 110003, INDIA

Lead: Alison Pridmore and Ian Skinner

9:30–10:00	REVIEW: WHAT WE LEARNED YESTERDAY AND QUESTIONS
10:00–11:00	4: MAKING IT HAPPEN: THE ROLE OF ELECTRIFICATION IN DRIVING FORWARD EFFICIENCY  Alison Pridmore
11:00–11.30	Coffee and tea break
11:30–13:00	5: TOOLKIT: THE ROLE OF STATE LEVEL ACTION  Alison Pridmore  Guest speaker: TBC – State EV Policy
13:00–14:00	Lunch
14:00–15:30	6. MAKING IT HAPPEN: THE ROLE OF BIOFUELS AND HYDROGEN  Ian Skinner  Guest Speaker: Mr DMR Panda, NTPC Hydrogen
15:30–16:00	Coffee and tea break
16:00–16:45	7. Making It Happen: Information
16:45–18:00	GROUP EXERCISE

### Energy Efficiency in Transport

VENUE: MAPLE HALL - INDIA HABITAT CENTRE (IHC) – NEW DELHI, DELHI 110003, INDIA

Lead: Alison Pridmore and Ian Skinner

9:30–10:00	REVIEW: WHAT WE SAW AND LEARNED YESTERDAY AND QUESTIONS
10:00–11:00	8. MAKING IT HAPPEN: INCENTIVES  Alison Pridmore  Guest Speaker: Sunitha Anup, ICCT (International Council on Clean Transportation), Non-Fiscal Incentives
11:00–11:30	Coffee and Tea Break
11:30–13:00	GROUP EXERCISE Alison Pridmore
13:00–14:00	Lunch
14:00–15:30	9. TOOLKIT: FINANCING VEHICLE EFFICIENCY Alison Pridmore Guest Speaker: Mr Rajiv Kumar, SIDBI (Small Industries Development Bank of India), EVOLVE
15:30–16:00	Coffee and Tea Break
16:00–17:30	GROUP EXERCISE
17:30–18:00	10. Next steps

#### Energy Efficiency Indicators and Evaluation

VENUE: MAGNOLIA HALL - INDIA HABITAT CENTRE (IHC) – NEW DELHI, DELHI 110003, INDIA

Lead: Mafalda Silva and Charles Michaelis

14:00 - 14.30	Introductory Roundtable
14:30 - 15:00	1. Where to start: Introduction to key monitoring and evaluation concepts
15.00-15.30	2. TOOLKIT: ENERGY BALANCES AS A FIRST TOOL FOR INFORMING POLICIES
15:30 – 16:00	Coffee and Tea Break
16.00-16.30	3. Case study: Ministry of Statistics and Programme Implementation
16.30-17.00	4. TOOLKIT: THE ROLE OF ENERGY EFFICIENCY INDICATORS
17.00-18.00	5. USING INDICATORS AND EVALUATION IN POLICYMAKING  DISCUSSION  6. CASE STUDY: INTRODUCTION TO STREAM
18:00-21:00	Social activities followed by reception

#### Energy Efficiency Indicators and Evaluation

VENUE: MAGNOLIA HALL - INDIA HABITAT CENTRE (IHC) – NEW DELHI, DELHI 110003, INDIA

LEAD: MAFALDA SILVA AND CHARLES MICHAELIS

9:30 – 10.00	REVIEW: WHAT WE LEARNED YESTERDAY AND QUESTIONS
10:00 – 11:00	7. Introduction to theories of change Activity: Develop Theory of Change for Energy Efficiency Action Plan
11:00 -11.30	Coffee and Tea Break
11:30-12:30	8. GROUPS FINALISE AND PRESENT THEORIES OF CHANGE
12:30-13:00	9. TOOLKIT: MULTIPLE IMPACTS OF ENERGY EFFICIENCY
13:00 – 14:00	Lunch
13:00 – 14:00 14.00-14.30	10. CASE STUDY: STATE ENERGY EFFICIENCY INDEX
14.00-14.30	10. CASE STUDY: STATE ENERGY EFFICIENCY INDEX
14.00-14.30 14.30-15.00	10. CASE STUDY: STATE ENERGY EFFICIENCY INDEX  11. TOOLKIT: POLICY AND PROGRAMME INDICATORS
14.00-14.30 14.30-15.00 15.00-15.30	10. CASE STUDY: STATE ENERGY EFFICIENCY INDEX  11. TOOLKIT: POLICY AND PROGRAMME INDICATORS  12. ACTIVITY: IDENTIFY INDICATORS FOR CASE STUDY

### Energy Efficiency Indicators and Evaluation

VENUE: MAGNOLIA HALL - INDIA HABITAT CENTRE (IHC) – NEW DELHI, DELHI 110003, INDIA

LEAD: MAFALDA SILVA AND CHARLES MICHAELIS

9:30 –10.00	REVIEW: WHAT WE LEARNED YESTERDAY AND QUESTIONS
10.00-10.45 10.45-11.00	15. What are the steps: How to tell if your policy made a difference  16. Gender Equality and Social Inclusion
11:00 -11.30	Coffee and Tea Break
11.30-12.30 12.30-13.00	17. What are the steps: Developing evaluation questions  Case Study: Impact assessment of energy efficiency programmes and policies  Mr Arijit Sengupta, Director, Bureau of Energy Efficiency
13:00 – 14:00	Lunch
14.00-15.00	18. ACTIVITY: DEVELOPING A MONITORING, EVALUATION AND LEARNING (MEL) FRAMEWORK
15.00-15.30	19. ACTIVITY: GROUP REPORTING OF MEL FRAMEWORKS.
15:30 – 16:00	Coffee and Tea Break
16.00-17.00	20. NEXT STEPS: USING INDICATORS AND EVALUATION
17.00-17.30	21. Where to get help: Additional resources in monitoring and evaluation
17.30-18.00	FEEDBACK ON COURSE AND CLOSE

### Making More Energy Efficiency Happen

VENUE: SILVER OAK - INDIA HABITAT CENTRE (IHC) – NEW DELHI, DELHI 110003, INDIA		
9:30 -	SECTOR STREAMS REPORT BACK ON KEY LESSONS	
	COMMUNICATION STRATEGIES TO SUPPORT ENERGY EFFICIENCY GOALS	
11:00 -	Coffee and Tea Break	
	GROUP PROJECT	
13:00 – 14:00	Lunch	
	GROUP PROJECT	
	PRESENTATION OF GROUP PROJECTS	
	CLOSING REMARKS & AWARDS	
	CERTIFICATES AND CONCLUSION	
15:30 – 16:00	Coffee and Tea Networking	

