

# **IEA Energy Efficiency in Emerging Economies**

Southeast Asia Training Week Programme



**1 – 4 April 2019**

*InterContinental Bangkok, Thailand*

 #energyefficientworld

# About the IEA

The IEA works to ensure reliable, affordable and clean energy for its 30 member countries and beyond. Our mission is guided by four main areas of focus: energy security, economic development, environmental awareness and engagement worldwide

## Energy Efficiency in Emerging Economies (E4) Programme

The E4 Programme collaborates on energy efficiency with six of the largest energy consuming emerging economies, namely Brazil, China, India, Indonesia, Mexico and South Africa. Together these countries currently use one third of the world's energy consumption and this proportion is set to grow. The programme also works within two regions, ASEAN and Latin America, supporting energy efficiency through established political and trading relationships.

The collaboration in these countries and within these regions is highly flexible based on changing needs, but falls into three main themes:

- understanding the potential for energy efficiency to enable a secure, sustainable energy supply
- supporting target setting and policy design to deliver energy efficient prosperity
- tracking progress through energy efficiency indicators and policy evaluation for continuous improvement.

There are five main modes of collaboration:

- hands on policy support: focusing on the day to day needs of officials responsible for delivering energy efficiency policies (directly with the people leading and supporting policy making)
- thematic workshops: bringing together officials and experts from a range of countries to explore a specific topic (collaboration with dozens of key stakeholders)
- policy training: group training for junior officials and future leaders, primarily through the E4 Training Weeks (targeted capacity building for hundreds of people)
- webinars: online seminars offering access to a range of experts for key topics (general capacity building for 1000s of people)
- online training: self-paced learning on energy efficiency indicators (general capacity building for potentially tens of 1000s of people).

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 (that 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.

# The Opportunity for Energy Efficiency

MORNING SESSION: INTERCONTINENTAL BANGKOK, BALLROOM 2

08:15 - 09:00	Participant Registration - Welcome Coffee and Tea
09:00 - 09:30	<b>WELCOMING ADDRESS</b> <ul style="list-style-type: none"> <li>Yongyuth Sawatdisawanee, Deputy Director General, Department of Alternative Energy Development and Efficiency, Ministry of Energy, Thailand</li> <li>Keisuke Sadamori, Director, Energy Markets and Security Directorate, International Energy Agency (IEA)</li> </ul>
09:30 - 09:40	Group Photo
09:40 - 10:15	<b>THE ENERGY EFFICIENCY CHALLENGE FOR SOUTHEAST ASIA</b> <b>Moderator:</b> Melanie Slade, IEA <ul style="list-style-type: none"> <li>His Excellency, Ivo Sieber, Ambassador of Switzerland to Thailand</li> <li>Andrew Beirne, Economic &amp; Prosperity Counsellor and UK Permanent Representative to UNESCAP, British Embassy Bangkok</li> <li>Hongpeng Liu, Director, Energy Division, United Nations Economic and Social Commission for Asia and the Pacific</li> <li>Pradeep Tharakan, Principal Energy Specialist, Asian Development Bank</li> </ul>
10:15 - 10:25	<b>THE FUTURE OF EFFICIENCY IN THAILAND</b> Wisaruth Maethasith, Department of Alternative Energy Development and Efficiency, Ministry of Energy, Thailand
10:25 - 10:30	<b>OPENING ADDRESS</b> Prasert Sinsukprasert, Inspector General, Ministry of Energy, Thailand
10:30 - 11:00	Coffee and Tea Break
11:00 - 11:50	<b>ENERGY EFFICIENCY INNOVATION IN SOUTHEAST ASIA</b> <b>Moderator:</b> John Dulac, IEA <ul style="list-style-type: none"> <li>Stanley Ng, Program Manager, New Energy Nexus Southeast Asia</li> <li>Monrawee Ampolpittayanan, Head of Public Affairs, Grab Thailand</li> <li>Joseph Joshua Garcia, Technical Services Design Engineer for Six Senses Hotels, Resorts, Spas</li> </ul>
11:50 - 12:10	<b>COOLING FOR ALL: CHALLENGES AND OPPORTUNITIES</b> Ben Hartley, Sustainable Development for All (SEforALL)
12:10 - 12:25	<b>ENERGY EFFICIENT PROSPERITY</b> Brian Dean, IEA
12:25 - 12:30	<b>THE WEEK AHEAD: THE TRAINING SESSIONS</b> Emily McQualter, IEA
12:30 - 14:00	Lunch

# Energy Efficiency in Buildings

VENUE: PINNACLE 1

LEAD: BRIAN DEAN, INTERNATIONAL ENERGY AGENCY

14:00 - 14:30 INTRODUCTORY ROUNDTABLE

14:30 - 15:30

**1. WHERE TO START: ENERGY USE IN BUILDINGS**  
*Brian Dean, IEA and Pierre Jaboyedoff, BEEP*

Scenario: An influential NGO is urging for all new construction to be zero emission or net zero energy buildings.  
Discussion question: *What factors are key to achieving zero emission or net zero energy buildings?*

15:30 - 16:00 Coffee and Tea Break

16:00 - 17:00

**2. WHERE TO START: ENERGY EFFICIENCY POTENTIAL IN BUILDINGS**  
*Brian Dean, IEA and Pierre Jaboyedoff, BEEP*

Scenario: You have been asked to create new policies for energy efficient buildings.  
Discussion question: *How do you determine where to start?*

17:30 - 19:30 Networking Reception (Ballroom 2)

# Energy Efficiency in Buildings

VENUE: PINNACLE 1

LEAD: BRIAN DEAN, INTERNATIONAL ENERGY AGENCY

09:00 - 09:30	REVIEW: WHAT WE LEARNED YESTERDAY AND QUESTIONS
09:30 - 10:30	<p><b>3. TOOLKIT: ENERGY EFFICIENT BUILDING DESIGN</b>  <i>Brian Dean, IEA and Pierre Jaboyedoff, BEEP</i></p> <p><u>Scenario:</u> Builders are saying that construction timelines are short and it is not possible to design more efficient buildings because it is too complicated.</p> <p><u>Discussion question:</u> <i>What changes in building design can enable more energy efficiency in buildings?</i></p>
10:30 - 11:00	Coffee and Tea Break
11:00 - 12:00	<p><b>4. TOOLKIT: ENERGY EFFICIENT BUILDING TECHNOLOGIES</b>  <i>Brian Dean, IEA and Pierre Jaboyedoff, BEEP</i></p> <p><u>Scenario:</u> Stakeholders are saying that new policies are not possible because the technology is not available that enables increased energy efficiency.</p> <p><u>Discussion question:</u> <i>What technologies could change your market for energy efficiency?</i></p>
12:00 - 12:30	<p><b>SPECIAL SESSION: TECHNOLOGY DEMONSTRATION</b>  <i>Daikin, Thailand</i></p>
12:30 - 13:30	Lunch
13:30 - 14:00	<p><b>SPECIAL SESSION: IEA'S TECHNOLOGY COLLABORATION PROGRAMMES</b>  <i>Brian Dean, IEA</i></p>
14:00 - 15:00	<p><b>5. TOOLKIT: ENERGY EFFICIENCY POLICIES AND TARGET SETTING</b>  <i>Brian Dean, IEA and Pierre Jaboyedoff, BEEP</i></p> <p><u>Scenario:</u> There has been a change of government and the incoming government wants a range of options for interventions to rapidly increase energy efficiency.</p> <p><u>Discussion question:</u> <i>How do you identify, prioritise and quantify these policy options?</i></p>
15:00 - 15:30	Coffee and Tea Break
15:30 - 17:00	<p><b>6. WHAT ARE THE STEPS? ENABLING INVESTMENT WITH ENERGY EFFICIENCY POLICIES</b>  <i>Brian Dean, IEA and Pierre Jaboyedoff, BEEP</i></p> <p><u>Scenario:</u> You continue to hear from stakeholders that all they need is money and then they will consider doing energy efficiency in buildings.</p> <p><u>Discussion question:</u> <i>What policy approaches can enable energy efficiency investment?</i></p>
18:00 - 20:00	Social Activity – Energy Efficiency Innovation

# Energy Efficiency in Buildings

VENUE: PINNACLE 1

LEAD: BRIAN DEAN, INTERNATIONAL ENERGY AGENCY

09:00 - 09:30 REVIEW: WHAT WE LEARNED YESTERDAY AND QUESTIONS

09:30 - 10:30

## 7. WHAT ARE THE STEPS? IMPLEMENTING CODES AND STANDARDS

*Brian Dean, IEA and Pierre Jaboyedoff, BEEP*

Scenario: A respected industry association claims that the building energy codes are out of date.

Discussion question: How do you advance building energy codes in your jurisdiction?

10:30 - 11:00

Coffee and Tea Break

11:00 - 12:30

## 8. WHAT ARE THE STEPS? BUILDING OPERATIONS AND PROCUREMENT

*Brian Dean, IEA and Pierre Jaboyedoff, BEEP*

Scenario: The Mayor wants to show leadership by example in public buildings

Discussion question: How do you deliver energy savings through public buildings?

12:30 - 13:30

Lunch

13:30 - 13:45

## SPECIAL SESSION: THE MULTIPLE BENEFITS OF ENERGY EFFICIENCY IN BUILDINGS

*Brian Dean, IEA*

13:45 - 15:00

## 9. DID IT WORK? EVALUATION AND ENERGY EFFICIENCY INDICATORS

*Brian Dean, IEA and Pierre Jaboyedoff, BEEP*

Scenario: Leadership wants to know how effective the building energy efficiency policies have been.

Discussion question: How do you determine the benefits of your policies and programmes?

15:00 - 15:30

Coffee and Tea Break

15:30 - 15:45

## SPECIAL SESSION: INTERNATIONAL AND REGIONAL INITIATIVES THAT CAN HELP

*Brian Dean, IEA and Pierre Jaboyedoff, BEEP*

15:45 - 17:00

## 10. ENERGY EFFICIENCY QUIZ

*Brian Dean, IEA and Pierre Jaboyedoff, BEEP*

# Energy Efficiency of Appliances and Equipment

VENUE: PINNACLE 2

LEADS: KEVIN LANE AND EMILY MCQUALTER, INTERNATIONAL ENERGY AGENCY

14:00 - 14:30 INTRODUCTORY ROUNDTABLE

14:30 - 15:30

## 1. WHERE TO START: PLANNING ENERGY EFFICIENCY PROGRAMMES

*Kevin Lane and Emily McQualter, IEA*

Scenario: The government wants a range of options for interventions to rapidly increase residential energy efficiency for appliances, equipment and lighting.

Discussion question: *How do you identify, prioritise and quantify these options?*

15:30 - 16:00

Coffee and Tea Break

16:00 - 17:00

## 2. WHERE TO START: SELECTING PRODUCTS FOR MEPS AND LABELLING PROGRAMMES

*Kevin Lane and Emily McQualter, IEA*

Scenario: You have been asked to expand your governments Standards and Labelling programme to cover more products.

Discussion question: *What steps would you take to develop your recommendation?*

Group Exercise

17:30 - 19:30

Networking Reception (Ballroom 2)

# Energy Efficiency of Appliances and Equipment

VENUE: PINNACLE 2

LEADS: KEVIN LANE AND EMILY MCQUALTER, INTERNATIONAL ENERGY AGENCY

09:00 - 09:30

GROUP EXERCISE

09:30 - 10:30

## 3. WHERE TO START: ASSESSING CURRENT PERFORMANCE AND SETTING MEPS

*Kevin Lane and Emily McQualter, IEA*

Scenario: A respected industry association claims that the MEPS levels for a certain product are so out of date that all the products on your market comply.

Discussion question: How do you go about testing this claim, and what do you do if this information is correct?

10:30 - 11:00

Coffee and Tea Break

11:00 - 11:30

## SPECIAL SESSION: TECHNOLOGY DEMONSTRATION

*Daikin, Thailand*

11:30 - 12:30

## 4. WHAT ARE THE STEPS: INDUSTRY TRANSFORMATION

*Melanie Slade, IEA*

Scenario: Several local manufacturers of electric fans have said that the MEPS levels currently in force in several neighbouring economies would ban most of their current products lines, and threaten their businesses.

Discussion question: What steps could you take to gain the support of local industry for the introduction of MEPS?

12:30 - 13:30

Lunch

13:30 - 14:30

## 5. WHAT ARE THE STEPS? STAKEHOLDER INVOLVEMENT AND COMMUNICATION

*Kevin Lane and Emily McQualter, IEA*

Scenario: You are asked to prepare a communications strategy for your MEPS programme.

Discussion question: What are the key elements to this strategy?

14:30 - 15:00

## 6. TOOLKIT: THE RELATIONSHIP BETWEEN PRODUCT EFFICIENCY AND PRICES

*Kevin Lane and Emily McQualter, IEA*

Scenario: You have been asked to prepare an impact statement for your regulations, including the effect on product prices.

Discussion question: How would you go about the task of estimating future product costs?

15:00 - 15:30

Coffee and Tea Break

15:30 - 17:00

## 7. TOOLKIT: MODERNISING ENERGY EFFICIENCY THROUGH DIGITALISATION

*Kevin Lane and Emily McQualter, IEA*

Scenario: There are special grants available to government departments for 'smart' initiatives that lead to reduced costs for business.

Discussion question: Which projects would you put forward?

18:00 - 20:00

Social Activity – Energy Efficiency Innovation



# Energy Efficiency of Appliances and Equipment

VENUE: PINNACLE 2

LEADS: KEVIN LANE AND EMILY MCQUALTER, INTERNATIONAL ENERGY AGENCY

09:00 - 09:30

GROUP EXERCISE

09:30 - 10:30

## 8. TOOLKIT: INSIGHTS INTO ENERGY LABELS

*Kevin Lane and Emily McQualter, IEA*

Scenario: A newspaper article has questioned the validity of energy labels on refrigerators, saying that the label does not reflect real usage. Your manager has asked you to outline a response.

Discussion question: *What do you say?*

10:30 - 11:00

Coffee and Tea Break

11:00 - 12:30

## 9. TOOLKIT: MONITORING, VERIFICATION AND ENFORCEMENT

*Kevin Lane and Emily McQualter, IEA*

Scenario: You've been given \$300,000 to improve compliance rates in your SandL programme.

Discussion question: *How do you go about deciding on the most effective ways to spend this?*

12:30 - 13:30

Lunch

13:30 - 15:00

## 10. DID IT WORK? MONITORING AND EVALUATING POLICIES AND PROGRAMMES

*Charles Michaelis, Strategy Development Solutions, Kevin Lane and Emily McQualter, IEA*

Scenario: The Minister wants to know how effective your programme has been.

Discussion question: *How do you go about answering this?*

15:00 - 15:30

Coffee and Tea Break

15:30 - 16:30

GROUP EXERCISE AND REPORT BACK

16:30 - 17:00

## 11. WHAT TO DO NEXT?

*Kevin Lane and Emily McQualter, IEA*

Round Table Discussion and Review

## Energy Efficiency in Industry

VENUE: PINNACLE 3

LEAD: PATRICK CRITTENDEN, SUSTAINABLE BUSINESS

14:00 - 14:30

INTRODUCTORY ROUNDTABLE

14:30 - 15:30

### 1. WHERE TO START: MAKING THE CASE FOR INDUSTRIAL ENERGY EFFICIENCY POLICY

*Patrick Crittenden, Sustainable Business*

Identify policy-making challenges, analyse data and explore business barriers to establish the need for industrial energy efficiency policies and programmes.

Discussion question: *What are the key justifications for the programmes you are involved in?*

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, Sustainable Business*

Set objectives and position energy efficiency programmes in the context of national priorities and other policies and programmes.

Discussion question: *What does success look like?*

17:30 - 19:30

Networking Reception (Ballroom 2)

# Energy Efficiency in Industry

VENUE: PINNACLE 3

LEAD: PATRICK CRITTENDEN, SUSTAINABLE BUSINESS

09:00 - 09:30 REVIEW: WHAT WE LEARNED YESTERDAY AND QUESTIONS

09:30 - 10:30

## 3. TOOLKIT: SELECTING ENERGY EFFICIENCY PROGRAMME MEASURES

*Patrick Crittenden, Sustainable Business and Uma Wirutskulshai, UNIDO*

Designing energy management programmes to maximise outcomes.

Discussion question: *How can energy management programmes create a foundation for industrial energy efficiency in your country?*

10:30 - 11:00

Coffee and Tea Break

11:00 - 12:30

## 4. TOOLKIT: SELECT ENERGY EFFICIENCY PROGRAMME MEASURES (CONT.)

*Patrick Crittenden, Sustainable Business*

Beyond energy management – technology dissemination and other energy efficiency measures to support Small and Medium-Sized Enterprises.

Discussion question: *What are the best approaches that you can use in your country to maximise energy efficiency outcomes in SMEs?*

12:30 - 13:30

Lunch

13:30 - 15:00

## 5. TOOLKIT: SELECT ENERGY EFFICIENCY PROGRAMME MEASURES (CONT.)

*Patrick Crittenden, Sustainable Business and Anthony Rowley, CCP Technologies*

Leveraging digital technologies for industrial energy efficiency and productivity.

Case study of the application of innovative technology across the food manufacturing cold chain.

Discussion question: *How can we accelerate the uptake and use of digital technologies to drive energy efficiency improvement?*

15:00 - 15:30

Coffee and Tea Break

15:30 - 17:00

## 6. UNDERSTANDING AND CONSULTING WITH STAKEHOLDERS

*Patrick Crittenden, Sustainable Business*

Identify stakeholders and develop a stakeholder engagement strategy.

Discussion question: *Who are your key stakeholders and how can you align your interests with theirs?*

18:00 - 20:00

Social Activity – Energy Efficiency Innovation

# Energy Efficiency in Industry

VENUE: PINNACLE 3

LEAD: PATRICK CRITTENDEN, SUSTAINABLE BUSINESS

09:00 - 09:30

REVIEW: WHAT WE LEARNED YESTERDAY AND QUESTIONS

09:30 - 10:30

## 7. TOOLKIT: FINANCING ENERGY EFFICIENCY

*Patrick Crittenden, Sustainable Business and Boonrod Yaowapruet, The Creagy Company*

Scaling up energy efficiency with innovative financial instruments.

Discussion question: What are the best options to assist industrial businesses with finance for energy efficiency?

10:30 - 11:00

Coffee and Tea Break

11:00 - 12:30

## 8. TOOLKIT: IMPLEMENTING PROGRAMMES

*Patrick Crittenden, Sustainable Business*

Designing a pilot and developing an implementation strategy.

12:30 - 13:30

Lunch

13:30 - 15:00

## 9. WHAT ARE THE STEPS? PROGRAMME DESIGN SCENARIO EXERCISE

*Patrick Crittenden, Sustainable Business*

In groups participants prepare for and then present on the following Scenario: You are working in a programme team to design a new, regional industrial energy efficiency programme:

- What industry sectors and segments will you target and why?
- Which stakeholders will you consult and involve?
- What measures will you include in your programme and what barriers will these overcome?
- How will you gather data and communicate progress?

15:00 - 15:30

Coffee and Tea Break

15:30 - 16:30

## 10. DID IT WORK? INDICATORS, EVALUATING AND SCALING UP PROGRAMMES

*Patrick Crittenden, Sustainable Business*

Design evaluations to track progress, establish programme strengths and to identify limitations and opportunities to scale up.

16:30 - 17:00

## 11. REVIEW: ROUNDTABLE DISCUSSION ON APPLICATION CHALLENGES AND THE DEVELOPMENT OF ACTION PLANS

*Patrick Crittenden, Sustainable Business*

## Energy Efficiency in Urban Planning

VENUE: PINNACLE 4

LEADS: JOHN DULAC AND MELANIE SLADE, INTERNATIONAL ENERGY AGENCY

14:00 - 14:30 INTRODUCTORY ROUNDTABLE

14:30 - 15:30

**1. WHERE TO START: ENERGY USE AND POTENTIAL IN URBAN SYSTEMS**  
*John Dulac, IEA*

Scenario: Your mayor/governor is under pressure to reduce energy consumption to meet national targets.  
Discussion question: *How do you help the mayor/governor understand the drivers of energy consumption in the city?*

15:30 - 16:00 Coffee and Tea Break

16:00 - 17:00

**2. TOOLKIT: ENERGY EFFICIENT URBAN PLANNING**  
*John Dulac, IEA*

Scenario: There is increasing urbanisation and increasing demand for urban services.  
Discussion question: *How can we design a more energy efficient urban system?*

17:30 - 19:30 Networking Reception (Ballroom 2)

# Energy Efficiency in Urban Planning

VENUE: PINNACLE 4

LEAD: JOHN DULAC AND MELANIE SLADE, INTERNATIONAL ENERGY AGENCY

09:00 - 09:30 REVIEW: WHAT WE LEARNED YESTERDAY AND QUESTIONS

09:30 - 10:30

## 3. TOOLKIT: URBAN TRANSPORT – SHIFT TO MORE EFFICIENT MODES

*John Dulac, IEA*

Scenario: Demand for mobility in your city/municipality is increasing.

Discussion question: What are the ways to increase mobility through more efficient forms of transport?

10:30 - 11:00

Coffee and Tea Break

11:00 - 12:30

## 4. TOOLKIT: URBAN TRANSPORT - IMPROVING EFFICIENCY OF TRANSPORT SERVICES

*John Dulac, IEA*

Scenario: Transport-related emissions continue to remain high in your local area.

Discussion question: What are options you can take to increase transport efficiency to reduce emissions?

12:30 - 13:30

Lunch

13:30 - 15:00

## 5. TOOLKIT: UTILITIES – WATER MANAGEMENT

*Melanie Slade, IEA*

Scenario: Local residents are complaining about unreliable and costly drinking water supply.

Discussion question: What can you do to reduce energy use in the water sector and improve service delivery?

15:00 - 15:30

Coffee and Tea Break

15:30 - 17:00

## 6. TOOLKIT: UTILITIES – LIGHTING AND OTHER URBAN SERVICES

*Melanie Slade, IEA*

Scenario: Local residents are complaining about dark and unsafe streets.

Discussion question: What can you do to reduce energy use in public lighting and improve service delivery?

18:00 - 20:00

Social Activity – Energy Efficiency Innovation

# Energy Efficiency in Urban Planning

VENUE: PINNACLE 4

LEADS: JOHN DULAC AND MELANIE SLADE, INTERNATIONAL ENERGY AGENCY

09:00 - 09:30

**REVIEW: WHAT WE LEARNED YESTERDAY AND QUESTIONS**

09:30 - 10:30

## 7. TOOLKIT: SMART CITIES

*John Dulac and Melanie Slade, IEA*

Scenario: Your mayor wants to be known for innovative solutions.

Discussion question: *What are the ways you can use digitalisation to further reduce urban energy use and improve urban services?*

10:30 - 11:00

Coffee and Tea Break

11:00 - 12:30

## 8. WHAT ARE THE STEPS? FINANCING OF PROGRAMMES

*John Dulac, IEA*

Scenario: There are ambitious targets but seemingly little funding available to realise energy efficiency projects.

Discussion question: *What are the financing options that you can take?*

12:30 - 13:30

Lunch

13:30 - 15:00

## 9. DID IT WORK? EVALUATION AND ENERGY EFFICIENCY INDICATORS

*John Dulac, IEA*

Scenario: The national government wants to know how effective the energy efficiency programmes have been and wants to compare different cities.

Discussion question: *How do you develop indicators that properly measure the benefits of your programmes?*

15:00 - 15:30

Coffee and Tea Break

15:30 - 16:15

## REVIEW: URBAN SYSTEMS

*John Dulac and Melanie Slade, IEA*

16:15 - 17:00

## 10. ENERGY EFFICIENCY QUIZ

*John Dulac and Melanie Slade, IEA*

## Energy Efficiency Indicators and Evaluation

VENUE: PINNACLE 5

LEADS: CHARLES MICHAELIS, STRATEGY DEVELOPMENT SOLUTIONS AND MAFALDA SILVA, INTERNATIONAL ENERGY AGENCY

14:00 - 14:30 INTRODUCTORY ROUNDTABLE

14:30 - 15:30

### 1. WHERE TO START: INTRODUCTION TO KEY MONITORING AND EVALUATION CONCEPTS

*Charles Michaelis, Strategy Development Solutions*

Introduction to monitoring and evaluation concepts.

Activity: Indicators and evaluation exercise

15:30 - 16:00

Coffee and Tea Break

16:00 - 17:00

### 2. WHERE TO START: USING INDICATORS AND EVALUATION IN NATIONAL POLICY

*Charles Michaelis, Strategy Development Solutions*

Introduction to the policy-making process, theories of change, and the use of monitoring and evaluation.

Scenario: The national government wants to know if the policies implemented in the previous years have been effective.

Discussion question: *What is the best way to know this?*

Activity: Roundtable discussion

17:30 - 19:30

Networking Reception (Ballroom 2)



# Energy Efficiency Indicators and Evaluation

VENUE: PINNACLE 5

LEADS: CHARLES MICHAELIS, STRATEGY DEVELOPMENT SOLUTIONS AND MAFALDA SILVA, INTERNATIONAL ENERGY AGENCY

09:00 - 09:30	REVIEW: WHAT WE LEARNED YESTERDAY AND QUESTIONS
09:30 - 10:30	<p><b>3. TOOLKIT: ENERGY BALANCES AS A FIRST TOOL FOR INFORMING POLICIES</b>  <i>Mafalda Silva, IEA</i></p> <p>Introduction to the energy balance and the insights and aggregated indicators relevant to energy efficiency policies.</p> <p><u>Activity:</u> Reading balances and discussion on applications of indicators</p>
10:30 - 11:00	Coffee and Tea Break
11:00 - 12:30	<p><b>4. TOOLKIT: DATA FOR EFFICIENCY INDICATORS</b>  <i>Mafalda Silva, IEA</i></p> <p>Introduction to the energy efficiency indicators and their relevance for tracking energy efficiency progress and informing policies.</p> <p><u>Activity:</u> Indicators exercise and discussion on applications</p>
12:30 - 13:30	Lunch
13:30 - 15:00	<p><b>5. WHAT ARE THE STEPS: MAIN DATA SOURCES FOR DEVELOPING EFFICIENCY INDICATORS</b>  <i>Mafalda Silva, IEA</i></p> <p>Overview of key data collection methods, and their advantages/disadvantages. Example of regional experience and practices.</p> <p><u>Discussion question:</u> <i>What are the benefits or drawbacks of each method? Where and how to find the data to develop efficiency indicators?</i></p> <p><u>Guest Presentation:</u> Asia-Pacific Energy Portal  <i>Sergey Tulinov, UNESCAP</i></p>
15:00 - 15:30	Coffee and Tea Break
15:30 - 17:00	<p><b>6. WHAT ARE THE STEPS: HOW TO TELL IF YOUR POLICY MADE A DIFFERENCE?</b>  <i>Charles Michaelis, Strategy Development Solutions</i></p> <p><u>Discussion question:</u> <i>What are the approaches you can take to answer this question?</i></p> <p><u>Activity:</u> What approaches would work in your country?</p>
18:00 - 20:00	Social Activity – Energy Efficiency Innovation

# Energy Efficiency Indicators and Evaluation

VENUE: PINNACLE 5

LEADS: CHARLES MICHAELIS, STRATEGY DEVELOPMENT SOLUTIONS AND MAFALDA SILVA, INTERNATIONAL ENERGY AGENCY

09:00 - 09:30

REVIEW: WHAT WE LEARNED YESTERDAY AND QUESTIONS

09:30 - 10:30

## 7. WHAT ARE THE STEPS: EFFICIENCY EFFECT AND OTHER DRIVERS OF ENERGY DEMAND

*Charles Michaelis, Strategy Development Solutions and Mafalda Silva, IEA*

Defining baseline, estimating energy savings from energy efficiency policies, and decomposition of energy efficiency effect.

10:30 - 11:00

Coffee and Tea Break

11:00 - 11:30

## REVIEW: SUMMARY OF KEY MESSAGES AND ACTIONS INVOLVED IN MONITORING AND EVALUATION

*Charles Michaelis, Strategy Development Solutions and Mafalda Silva, IEA*

11:30 - 12:30

## 8. ACTIVITY: DEVELOPING A MONITORING AND EVALUATION PLAN

*Charles Michaelis, Strategy Development Solutions and Mafalda Silva, IEA*

- *What are the expected impacts?*
- *What are relevant indicators and evaluation questions?*
- *What data is needed to develop the indicators and answer the evaluation questions?*
- *What are possible obstacles?*

Group exercise

12:30 - 13:30

Lunch

13:30 - 15:00

## 9. GROUP WORK ON ACTIVITIES

*Charles Michaelis, Strategy Development Solutions and Mafalda Silva, IEA*

Activity: Group reporting of monitoring and evaluation plans

15:00 - 15:30

Coffee and Tea Break

15:30 - 16:00

## 10. WHERE TO GET HELP: ADDITIONAL RESOURCES AND ASPECTS TO TAKE INTO ACCOUNT IN MONITORING AND EVALUATION

*Charles Michaelis, Strategy Development Solutions and Mafalda Silva, IEA*

16:00 - 16:30

## 11. ENERGY EFFICIENCY QUIZ

*Charles Michaelis, Strategy Development Solutions and Mafalda Silva, IEA*

16:30 - 17:00

## 12. WHAT TO DO NEXT? ROUNDTABLE DISCUSSION AND FEEDBACK ON COURSE

*Charles Michaelis, Strategy Development Solutions and Mafalda Silva, IEA*

## Making More Energy Efficiency Happen

VENUE: BALLROOM 2

09:00 - 09:30	<b>SECTOR STREAMS REPORT BACK ON KEY LESSONS</b> Charles Michaelis and Patrick Crittenden
09:30 - 10:00	<b>COMMUNICATION STRATEGIES TO SUPPORT ENERGY EFFICIENCY GOALS: THE PRINCIPLES OF PLANNING AND IMPLEMENTING EFFECTIVE PUBLIC OUTREACH CAMPAIGNS</b> Melanie Slade, IEA
10:00 - 10:30	Coffee and Tea Break
10:30 - 11:30	<b>COMMUNICATION STRATEGIES TO SUPPORT ENERGY EFFICIENCY GOALS: THE PRINCIPLES OF PLANNING AND IMPLEMENTING EFFECTIVE PUBLIC OUTREACH CAMPAIGNS</b> Melanie Slade, IEA
11:30 - 12:00	<b>FUEL SUBSIDIES AND ENERGY EFFICIENCY: INTRODUCTION</b> Brian Dean, IEA
12:00 - 13:00	Lunch
13:00 - 13:30	<b>FUEL SUBSIDIES AND ENERGY EFFICIENCY – GROUP WORK</b> Brian Dean, IEA
13:30 - 14:30	<b>FUEL SUBSIDIES AND ENERGY EFFICIENCY – REPORT BACK</b> Brian Dean, IEA
14:30 - 14:45	<b>FUEL SUBSIDIES AND ENERGY EFFICIENCY – AWARDS</b> His Excellency, Uffe Wolffhechel, Ambassador of Denmark to Thailand and Cambodia
14:45 - 15:00	Coffee and Tea Break
15:00 - 16:00	<b>CLOSING REMARKS AND AWARDING OF CERTIFICATES</b>

## Sector Leaders

---



**Brian Dean** has more than 20 years of experience in energy efficiency and leads IEA's work on energy efficiency in buildings to support governments and organizations globally with energy efficiency policy. Brian has been an author for various recent reports, including IEA's Future of Cooling, Energy Efficiency 2018, and the Global ABC Global Status Report for Buildings and Construction. Prior to joining the IEA in 2014, Brian was head of Energy Efficiency Policy and Analytics at ICF International, where he supported the development of the ENERGY STAR program, utility-based energy efficiency programs, building energy codes and energy demonstration projects. Brian has an education in engineering, architecture and political science from Rensselaer Polytechnic Institute and Massachusetts Institute of Technology.



**Kevin Lane** has 25 years' international experience in various technical and managerial roles in energy efficiency, especially focussing on lights and appliances. He has successfully contributed to over a dozen European energy end-use studies commissioned as preparation for EU product policy (e.g. EU labelling, minimum efficiency standards and voluntary agreements), including UK impact assessments. He has supported the development of standards and labels in various other countries (including: EU, China, US, Australia, Vietnam). While at the Environmental Change Institute, University of Oxford he created and developed the DECADE residential end-use model, which has been used as the basis for the UK Government's impact assessment for multiple Eco-design measures.



**Emily McQualter** is a Policy Analyst for the IEA's Energy Efficiency in Emerging Economies Programme (E4), managing E4's work in Southeast Asia. Emily has experience with energy efficiency policy making within the Australian Government as part of the Equipment Energy Efficiency Programme (E3) and has lived and worked on energy efficiency issues in Southeast Asia for a number of years. Emily spent time in rural Philippines and in Thailand, where she worked for the United Nations Environment Programme, Regional Office for Asia and the Pacific on energy efficiency programmes. Emily received a BSc and Masters of Natural Resource Management from the University of Melbourne.



**Patrick Crittenden** is the Director of Sustainable Business. He is a recognised expert in industrial energy efficiency policy and practice and has provided advisory and consultation services to national and regional governments on an extensive range of policies including the Australian Energy Efficiency Opportunities Act and the Mongolian Energy Efficiency Business Programme. Patrick is an engaging speaker and facilitator and has designed and delivered stakeholder engagement and energy efficiency capacity building events in Australia, the United States, France, India, Russia and Mongolia. He holds a Bachelor of Social Science and Policy degree as well as a PhD in Management. His PhD research examined the interaction between government policies, market forces and organisational culture to provide new insights into how and why energy management practices change in large energy using businesses.



**John Dulac** is an Energy Analyst in the Directorate of Sustainability, Technology and Outlooks at the International Energy Agency. He leads the energy technology and policy analysis in the buildings sector, contributing to IEA efforts to better understand the implications for a low-carbon economy. He also leads the IEA's Collaborative on Combined Heat and Power and efficient District Heating and Cooling (CHP/DHC) and is also the desk officer for the Technology Collaboration Programmes (TCPs) on Energy Conservation through Energy Storage (ECES), Heat Pump Technologies (HPT), District Heating and Cooling including Combined Heat and Power (DHC) and Energy Efficient End-Use Equipment (4E). John previously worked as a research associate at the Asian Development Bank. He received a BSc in Environmental Engineering and BA in International Relations from Tufts University, and an MSc in Urban Planning and Master of International Affairs at Columbia University.



**Mel Slade** has spent nearly thirty years in energy efficiency policy development and implementation in many parts of the world. She started out working in the UK Government on industrial energy efficiency and has worked with many other governments to establish energy efficiency programmes, perhaps most notably, the Government of China in the 1990s. She also spent six years overseeing the regulation of minimum energy performance standards and labels for lighting, equipment and appliances in Australia and New Zealand. Mel moved to the International Energy Agency in February 2014 to manage the Energy Efficiency in Emerging Economies Programme. Mel and her team work with policy makers in Brazil, China, India, Indonesia, Mexico, South Africa and Thailand to develop more effective energy efficiency policy, track its progress and assess its potential.



**Charles Michaelis** has 25 years' experience of evaluating government policies and programmes. He has worked in Indonesia, Vietnam and China as well as Australia and the UK. Within the energy efficiency field, Charles has conducted more than 100 evaluations of policies relating to industry, buildings, lighting and appliances. He has also worked on renewables and demand side response. Currently, Charles is leading a major evaluation of the UK's International Climate Finance. Charles has expertise in a wide range of approaches to evaluation, data collection and analysis approaches. He believes that, even with limited resources, it is always possible to use evidence and analysis to improve the effectiveness of programmes and policies.



**Mafalda Silva** is a Statistics Manager in the IEA Energy Data Centre. She leads the end use data and energy efficiency indicators work stream, and she is in charge of the respective energy efficiency indicators data collection and related publications and databases at the IEA, which have recently been expanded to include countries beyond IEA. More recently, she has also been working in developing international collaboration around data – particularly efficiency data – under the Clean Energy Transitions Programme for the IEA. Previously to joining the IEA, she worked as a researcher for over seven years on the fields of energy demand in cities, urban planning and urban metabolism. She also holds a PhD in Sustainable Energy Systems and a BSc. in Environmental Sciences at the University of Porto.



