



**7<sup>th</sup> Policy and Implementation  
Committee Meeting  
Gold Coast, 18-20 May, 2009**

# **BUILDINGS AND APPLIANCES TASK FORCE**

**19 May, 2009**

**Jungwook Park (Ministry of Knowledge Economy)**

**Chair**

**Mark Ginsberg (US DOE) & Kathleen Hogan (USEPA)**

**Co-Chairs**

# BATF Mission & Goals

- Use cooperative mechanisms to support the further uptake of increasingly more energy efficient *appliances*.
- Promote best practice and demonstrate technologies in *buildings* and *appliances*.
- Support the integration of appropriate *mechanisms* to increase the uptake of energy efficient buildings and appliances.
- Systematically identify and respond to the range of barriers that limit the implementation of end-use energy efficiency practices and technologies.



# BATF Highlights

- BATF meeting April 8-10, 2009, New Delhi
- Two new projects
  - International Coalition/ Dialogue on Net-Zero Energy Homes (proposed as a new APP Flagship)
  - Harmonization of Test Procedures for Energy Recovery Ventilators
- Three existing APP Flagship projects
  - CFL Harmonization
  - High Performance Buildings and Developments – Green Buildings Flagships in China
  - Green Spaces™ IT / ITeS Special Economic Zone
- Eleven Themes with 44 on-going projects

# Report on 7<sup>th</sup> BATF Meeting

- **Held in New Delhi, India, April 8-10, 2009. Thanks to Host: BEE**
- **Approved Two New Project Proposals**
  - Canada proposed International Coalition/ Dialogue on Net-Zero Energy Homes as an APP Flagship Project
  - Korea proposed Harmonization of Test Procedures for Energy Recovery Ventilators
- **Continued Discussion on Performance Measures**
- **Discussed Collaboration with the Renewable Energy and Distributed Generation Task Force:** Canada will chair the REDG Task Force and expressed an intention to host a future joint meeting between BATF and REDGTF and Cement in March, 2010. The Proposed NZEH project will be a vehicle to stimulate collaboration between BATF and REDGTF.
- **Discussed a process of getting prior endorsement by BEE for BATF projects related to India**

# Report on 7<sup>th</sup> BATF Meeting

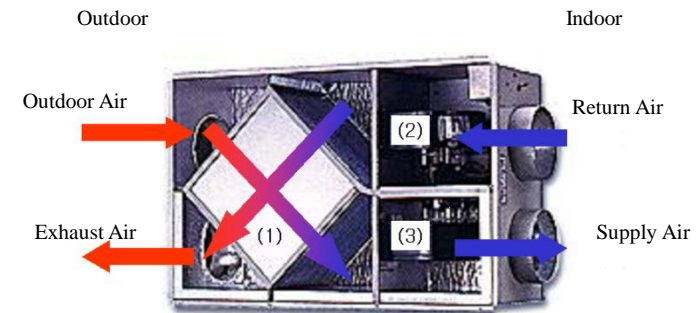
- **Forum on APP Indian Grantee Programs** facilitated by USDOS
  - Panelists consisted of BATF project leaders who shared their experiences in implementing APP BATF projects and discussed what steps BATF can take to help project leaders to succeed further.
- **International Net Zero Energy Home Coalition / Dialogue** proposed by Robin Sinha, Natural Resources Canada
  - Establishment of an industry driven International Coalition or Dialogue
  - NZE Workshops/Technology transfer
  - Roadmap Report
  - Vehicle to link with other BATF projects, REDG and Cement Task Force
- **International Workshop on High Performance Commercial Buildings**
  - 4 International experts, India, China, Japan, US presents on high performance commercial buildings

# New BATF Project-1



- **International Coalition/ Dialogue on Net-Zero Energy Homes as an APP Flagship Project**
- **Lead by Canada and Co-lead by US Public and Private Sectors**
- **Goal** : Establish a collaborative international partnership focused on net zero housing that will accelerate the identification of optimal solutions; improve conditions for innovation; and transform the market.
- **Project Deliverables**
  - Establishment of an industry driven International Coalition or Dialogue
  - NZE Workshops/Technology transfer – Montreal, June 8-10, 2009 (Postponed)
  - Design Charrettes for new promising projects – Possibly India
  - Roadmap Report
  - Platform for bi-lateral and multilateral demonstration projects
  - Vehicle to link with other BATF projects, REDG and Cement Task Force

# New BATF Project-2



- **Harmonization of Test Procedures for Energy Recovery Ventilators**
- **Lead by Korea (KTL)** and Participation by Canada (CSA), Japan (JRAIA), US (AHRI)
- **Goals and Objective**
  - To develop an International standard for arriving at test procedures that measure product performance that are harmonized among the APP countries, recognized as such by manufacturers, and could be adopted by other countries interested in developing regulatory standards for Energy Recovery Ventilators
- **Project Deliverables**
  - Evaluate the methodological problems with differences in test procedures
  - To develop harmonized test procedures for Energy Recovery Ventilator
  - To amass testing results using the harmonized test procedure for Heat Recovery Ventilator
  - To derive a series of performance rating from the testing results for this product
  - To ensure cooperation between ISO and APP on ERV

# Approved BATF Projects

	Project Theme	Ongoing Projects
Appliances	<b>Harmonization of Test Procedures</b> (Korea Lead) <i>- Flagship 1. Quality Assurance and Harmonization of CFLs (USA-Australian lead)</i>	<b>7 projects</b>
	<b>Alignment of National Standby Power Approaches</b> (Australia Lead)	<b>1 project</b>
	<b>Market Transformation</b> (Japan Lead)	<b>6 projects</b>
Buildings	<b>Building Certification</b> (China Lead)	<b>5 projects</b>
	<b>Improvements to Existing Buildings</b> (USA Lead)	<b>11 projects</b>
	<b>Role Enhancement of Building Energy Codes</b> (Korea Lead)	<b>3 projects</b>
	<b>High Performance Buildings and Developments</b> (Australia Lead) <i>- Flagship 2. Green Buildings Flagships in China (USA lead)</i> <i>- Mayors' Training Center</i> <i>- Buildings Center of Excellence</i> <i>- Olympic Micro-Energy Building (Completed)</i>	<b>8 projects</b>
	<i>- Flagship 3. Green Spaces™ (India Lead)</i>	
	<b>Utility Regulation and Incentives</b> (USA Lead)	<b>2 projects</b>
	<b>Smart Systems</b> (Australia Lead)	<b>1 projects</b>
	<b>Green Leases</b> (Australia Lead)	<b>1 projects</b>
	<b>Commercial Financing</b> (USA Lead)	<b>1 projects</b>

**\* 52 BATF Projects: 44 ongoing, 1 completed, 7 cancelled or hibernating**



# Flagship 1. Quality Assurance & Harmonization of Compact Fluorescent Lamps

- **Selected actions since last update**

- 0, 100, and 2000 hour quality tests on more than 1,500 CFLs
- Development of industry-led quality guidelines for CFLs with three performance tiers.
- Roundtable on CFL quality and compliance in India.
- NLTC representative attended IEC technical panel meeting in Florida USA in February 2009.

- **Selected next steps**

- CFL quality guidelines.
- Report on CFL standards in Asia.
- Guide to phasing out inefficient lamps.
- Workshop on CFL quality in China.
- Global Harmonised Performance Standards.



# Flagship 2. High Performance Buildings and Developments – Green Buildings Flagships in China

- **Actions Since Last Update**

- **Mayors’ Training Center:** New building design being discussed; timetable for construction and curriculum is under development.
- **Olympic Village Micro-Energy (Near-Zero Energy) Building**
  - Completed in August 2008, in time for the start of the Olympic Games
  - Received the Leadership in Energy and Environmental Design (LEED) Gold Award from the U.S. Green Building Council in recognition of its environmentally-friendly design.
- **Center of Excellence (COE):** USDOE is exploring opportunities to establish a COE in a high visibility building in Beijing. Plans for a venue should be determined in 2009.

- **Next Steps**

- **Mayors’ Training Center:** The curriculum development is expected to begin in 2009, with a possible exchange of Mayors and/or “paired-city” programs.
- **Center of Excellence:** Plans for a venue should be determined in 2009.

# Flagship 3. Green Spaces™ IT / ITeS Special Economic Zone



- **Selected actions since last update**

- Master Plan submitted to Haryana Government
- Memorandum of Understanding (MoU) with Haryana Renewable Energy Development Agency (HAREDA) for setting up of a 1 MW rooftop Solar PV Power Plant signed in September, 2008

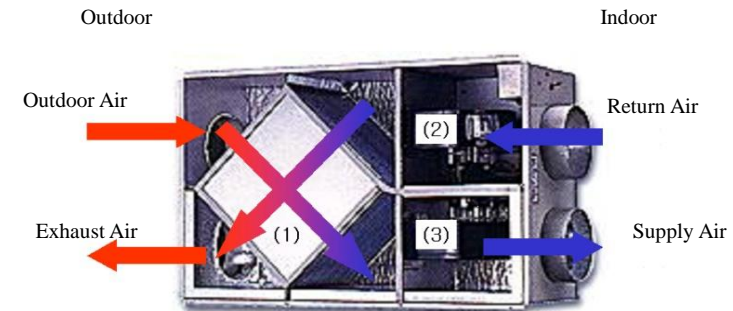
- **Selected next steps**

- Complete Financing
- Start the Construction
- Market Feasibility Review
- LEED/Griha Monitoring
- LEED/Griha Certification
- LEED/Griha Post Commissioning Monitoring



# REQUEST PIC Approval of Flagship 4 and New Project

- **International Coalition/  
Dialogue on Net-Zero Energy  
Homes**
- **Harmonization of Test  
Procedures for Energy  
Recovery Ventilators**



# Detailed BATF Reports

**ASIA PACIFIC PARTNERSHIP ON CLEAN DEVELOPMENT & CLIMATE**  
**BUILDINGS AND APPLIANCES TASK FORCE**  
7<sup>th</sup> PIC Meeting, Gold Coast, 18-20 May, 2009



# Theme 1. Harmonization of Test Procedures

- **Project Outputs**
  - Potential greenhouse gas emission reductions of **1,200 MT CO<sub>2</sub> per year** when 10 products are harmonized with **10% improvement** across APP Partners.
- **BATF-06-01 Harmonization of Test Procedures for Electric Motors (Australia)**
- **BATF-06-02 Harmonization of Test Procedures for Motor Systems (Australia)**
  - Project workshop held on 6 February 2009 in Sydney, Australia.
  - A testing round robin of electric motors between Germany, Australia, China and Korea is underway and expected to be completed in 2009
- **BATF-06-03 Phase-out of Inefficient Lighting (Australia)**
- **BATF-06-04 Harmonization of Test Procedures for HVAC (Korea)**
  - HVAC project workshops were held in Sydney on 3 Nov., and in Kyoto on 30 March 2009 in conjunction with ISO TC86 SC6 WG1
- **BATF-06-05 Harmonization of Test Procedures for Household Refrigerators (Japan)**
  - Two project workshops were held in Sydney on 29 Sep. 2008 after IEC TC59. and in Munich on 3 Nov. 2008 before IEC TC59 WG12
- **BATF-06-06 Harmonization of Test Procedures for Electronics (USA)**
- **BATF-07-36 Quality Assurance & Harmonization of Compact Fluorescent Lamps (Australia & USA): APP Flagship**

# Theme 2. Standby Power

- **BATF-06-07 Alignment of National Standby Power Approaches (Australia)**
- **Summary**
  - Aim is to develop a common policy framework across APP Partner countries to deliver lower standby power (1 watt *voluntary* target by 2010)
  - Partners have agreed to:
    - a basket of common products
    - a simple measurement approach
  - Website completed and available to the public at <http://www.energyrating.gov.au/standby.html>
- **Resource Update**
  - AUD\$1,860,000 final funding approved from the Australian Government
  - In-kind commitment of AUD\$850,000 from Korea, China, India, US, Japan, IEA, KEMCO, IIEC, AEEMA, CESA
- **Next steps**
  - Finalize the report on preliminary data collections
  - Seek adjustment of final funding (TFLA)
  - Continue data collection activity (twice yearly) and reporting

# Theme 3. Market Transformation

5th draft version 14 March 2009

Market Transformation  
Good Practices Handbook

March 2008

Project 3 <Market Transformation>

Buildings and Appliances Task Force  
Asia Pacific Partnership on Clean Development and Climate

- **BATF-06-08 Market Transformation Policies in APP Countries: Handbook and Analysis (Japan)**
  - 3<sup>rd</sup> Project Workshop was held in 23-24 Feb 2009.
  - Completed the second edition of the Market Transformation handbook.
- **BATF-06-09 Government procurement best practices (USA)**
- **BATF-06-10 Support for implementation of an energy efficiency endorsement labeling program for India (USA)**
- **BATF-06-11 Pilot US-China energy efficiency endorsement labeling harmonization (USA)**
- **BATF-07-37 Mitigating climate change via implementation of India's energy efficiency standards and labeling program (USA)**
- **BATF-08-47 US-India Cities Partnership for Sharing Best Practices on Energy and Environment (USA)**

# Theme 4. Building Certification

- **BATF-06-12 Evaluate policy and management systems for building certification and encourage adoption where appropriate (China)**
  - Local building certification center in different climate zones.
  - Pilot certification on the new headquarter of China National Petroleum Corporation.
- **BATF-06-13 Pilot projects on building energy labeling (China)**
- **BATF-06-14 Establish information exchange network for continuous revision and improvement (China)**
- ***BATF-06-15 Provide green building guides and related training materials to APP countries : Cancelled***
- **BATF-06-16 Share U.S. experiences on building data and benchmarking (USA)**
- ***BATF-06-17 Office Operational Building Energy Rating (Australia): Transformed into 07-46***
- **BATF-09-50 Building Energy Performance Certification: Recently endorsed**
  - \$ 100K for the Building energy data collection and analysis.

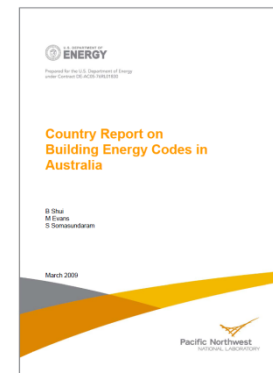
# Theme 5. Improvements to Existing Buildings

- **BATF-06-18 Training workshops: on energy management, low-cost EE in existing buildings, tools, standardization, technical issues (USA)**
- **BATF-06-19 Pilot implementation of no-cost and low-cost EE measures in existing buildings (USA)**
- ***BATF-06-20 Proposed framework screening tool for evaluating potential for retrofits (Australia) : merged with 06-23***
- **BATF-06-21 Retrofit of Existing Building Chillers in India (USA)**
- **BATF-06-22 Develop a guide to retrocommissioning of existing buildings (USA)**
- **BATF-06-23 Energy efficiency upgrade: low energy high rise project (including international extension) (Australia)**
  - Stage 1 of Low Energy High Rise has been achieved with the final report on the Australian surveys, research and analysis on non technical barriers completed.

# Continued...

- **BATF-07-38 The urban climate project – building clean and efficient cities (joint project with Theme, Market Transformation) (USA)**
  - ICLEI (grantee) has engaged in MOUs with two cities, Rajkot in Gujarat and Coimbatore in Tamil Nadu
  - On March 12-13, ICLEI held a national APP workshop for more than 25 cities and 100 participants.
- **BATF-07-39 Australian-Indian building tune-ups (Australia)**
- **BATF-07-40 Energy management program in India (USA)**
  - Project assistance led to launch of an Energy Efficiency Star Rating Program for office buildings in India; “Energy Efficiency in Hospitals - Best Practice Guide” was prepared and launched by BEE
- ***BATF-07-41 Tianjin green office building retrofit (Australia): Cancelled***
- **BATF-08-48 Existing Building Renovation in China (USA)**
  - Developed and reviewed energy-efficient renovation plan; Prepared case study of building renovation and disseminated case study in publications and conferences
- **BATF-09-51 Improving EE in buildings through improved operations (China & USA): recently endorsed.**

# Theme 6. Building Codes



- **BATF-06-24 Survey building energy codes and Develop Scenarios for reducing energy consumption through energy code enhancement in APP countries (Korea & USA)**
  - APP country reports on building energy codes were completed by Korea Institute of Construction Technology and Pacific Northwest National Laboratory of U.S. Department of Energy with the help of member countries (Mar. 2009)
  - Project meeting in Washington DC USA (KICT/PNNL) (Nov. 2008)
- **BATF-06-25 Develop/harmonize window rating procedures and/or labels (USA)**
  - Australia: Developed compatible window energy ratings and labeling program in one APP country (Mar. 2009)
  - China : Building Envelope Safety/Energy Efficiency Experts Workshop, Beijing (Mar. 2009)
- **BATF-09-52 Implementation of building energy codes in China (USA & China):** recently endorsed project

# Theme 7. High Performance Buildings and Developments

- **BATF-06-26 APP web portal for information on high-performance buildings and developments (Japan)**
- **BATF-06-27 Green building flagships in China (USA): APP Flagship**
- **BATF-06-28 SB08 – 6th World Sustainable Building Conference and other conferences (Australia): Completed**
  - SB08 Conference held in September 2008
  - Workshops conducted on high performance buildings in China in June 2008 and in India in October 2008
- **BATF-07-42 High performance commercial buildings in India (USA)**
  - Step 1 (Energy and comfort performance audits of 10 existing commercial buildings – pre-ECBC era buildings) nearly complete – nine of 10 buildings audited.
  - Step 2 (Energy performance validation through computer models) completed.

# Continued...

- **BATF-07-43 Regional energy efficiency centers in India (USA)**
  - Fixed Obligation Grant (FOG) Agreement signed with See Tech
- **BATF-07-44 Promotional framework for passive design and solar energy technologies in energy-efficient buildings (India)**
- **BATF-07-45 Indian high tech buildings initiative: Data centers pilot (USA)**
  - Feb 2009: Participation and presentations at NASSCOM conference in Mumbai (February 2009), Participation in BEE/CII working groups to develop Indian Guidelines for electrical and mechanical system guidelines
  - Feb 2009: Presentation to industry and government in Delhi - BEE/CII sponsored
  - Mar 2009: Participate in NASSCOM Green Initiative (Mumbai conference and working group meeting in Bangalore in (March 2009)
- ***BATF-07-46 China Building Energy Rating Tool (CBERT) (Australia): Cancelled***
- **BATF-08-49 Green Spaces™- IT/ITe Special Economic Zone: APP Flagship**

# Theme 8. Utility Regulations and Incentives

- **BATF-06-29 Good practices and lessons learned in the APP region to promote financing and the implementation of energy efficiency programs in utilities (USA)**
- **BATF-06-30 Technical support for China and India (USA)**
  - This theme has been suspended due to limited resources in US EPA and now it is seeking new leadership.



# Theme 9. Smart Systems

- **BATF-06-31 Smart Meters (Australia)**
- **Status Updated**
  - Final funding approved by Australian Government;
  - Approval of Indian Government being sought; and
  - Support or engagement from an Indian electricity utility is being sought with the assistance of the Indian Government.
- **Next Steps**
  - Decide whether or not to continue with the project or to hibernate.
  - If project is to continue the aim is to recruit up to 4 utilities.

# Theme 10. Green Leases

- **BATF-06-32 Green Leases (Australia)**
- **Status Updated**
  - Workshop in New York or Washington postponed to September/October 2009
  - Workshop to identify best practice models suitable for APP applications
  - Participation/contribution by other countries is welcomed
- **Next Steps**
  - US workshop in September/October 2009
  - Finalisation of negotiations with the industrial partners
  - Commencement of pilot program



# Theme 11. Commercial Financing

- **BATF-06-35 India Public Sector Market Assessment (USA)**
  - **Status Updated**
    - US has committed \$105,000 to this effort
    - World Bank intends to use results of study in its justification for \$1 million GEF grant to India BEE for technical assistance to support India loan program for public buildings and to support subsequent analyses
  - **Next Steps**
    - Prepare energy performance profiles for segments of public building population, estimated from available audit and survey data
    - Prepare first cut estimates of energy savings potential (range) and possible GHG reductions (range) in existing government buildings in India
    - Deliver energy consumption profiles, data collection template, and contact list to stakeholders so that they can refine first-cut estimates provided by this study
- ***BATF-06-33 Share Approaches, Cancelled***
- ***BATF-06-35 Joint Projects, Cancelled***

# BATF Next Steps

- 8<sup>th</sup> BATF meeting in Tokyo around end of Oct or beginning of Nov, 2009
- Canada volunteered to host a joint T/F meeting with REDG and Cement Task Force in March, 2010
- Prepare discussion paper for performance measures
- Update BATF Action Plans and BATF Reporting Guidelines



# ***THANK YOU FROM BATF !***

