GBPN | *Building Policies for a Better World*

Global Buildings Performance Network

How To Save Energy Using Renovation Policy Measures

The overall performance of current best practice renovation policies for residential buildings

29th of April, 2014

Jens Laustsen & Sophie Shnapp
Technical Director & Policy Analyst

jl@gbpn.org, ss@gbpn.org

Working Globally but with Regional Presence

GBPN | *Building Policies for a Better World*
Global Buildings Performance Network

Transforming Policies and markets

GBPN

GBPN / Shakti
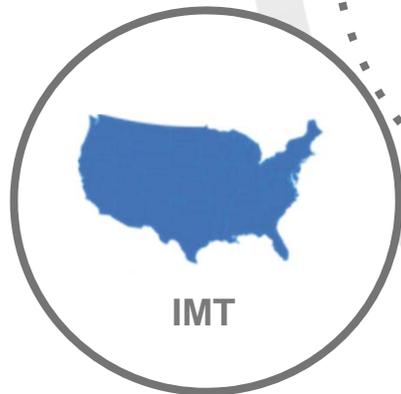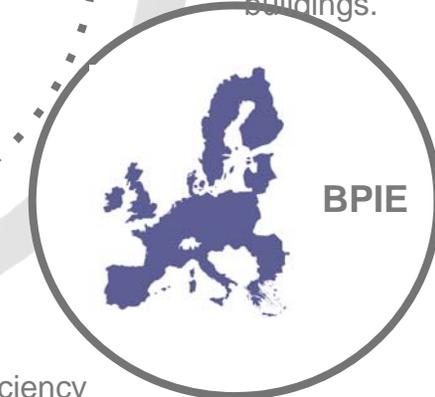
Harvesting best practices policies in building energy efficiency and performance.

GBPN China

Advancing policies and programs that promote low carbon, energy & efficient buildings.

Global Center

Conducting cross-cutting research and analysis

Connecting regional institutions, and share the best thinking building energy and GHG policy.

Communicating progress toward achieving the GHG abatement potential of the building sector

IMT

BPIE

Offering world class energy efficiency expertise to policy makers and business leaders

Large Risks at Stake
Need for Fast Action

Limiting climate change to 2 degrees

Buildings account for more 1/3 of emission
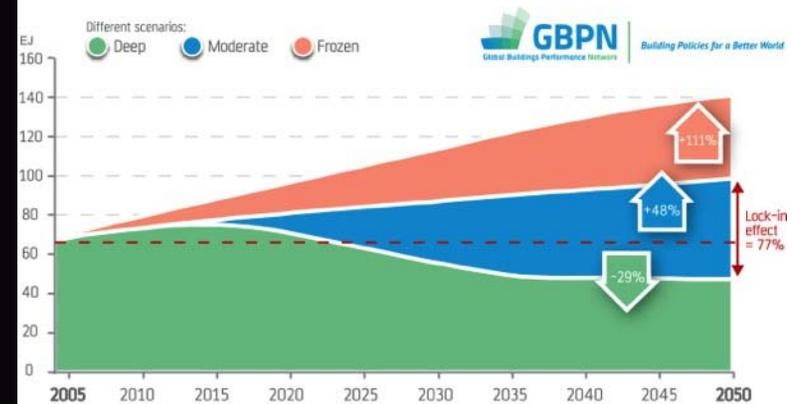
Going Deep

*"Acting Deep means dramatically upscaling the development of **state-of-the-art buildings** that can follow the Deep Path towards energy and related CO2 reductions from Buildings in each*

Buildings account for:

→ **30% to 40%** of total world's final energy demand

→ **more than 30%** of all energy-related CO_2 emissions.

More than 60% of global final building energy use in 2005 come from the 4 priority GBPN regions (China, Europe, India and the United States).

Implementing Deep Scenario
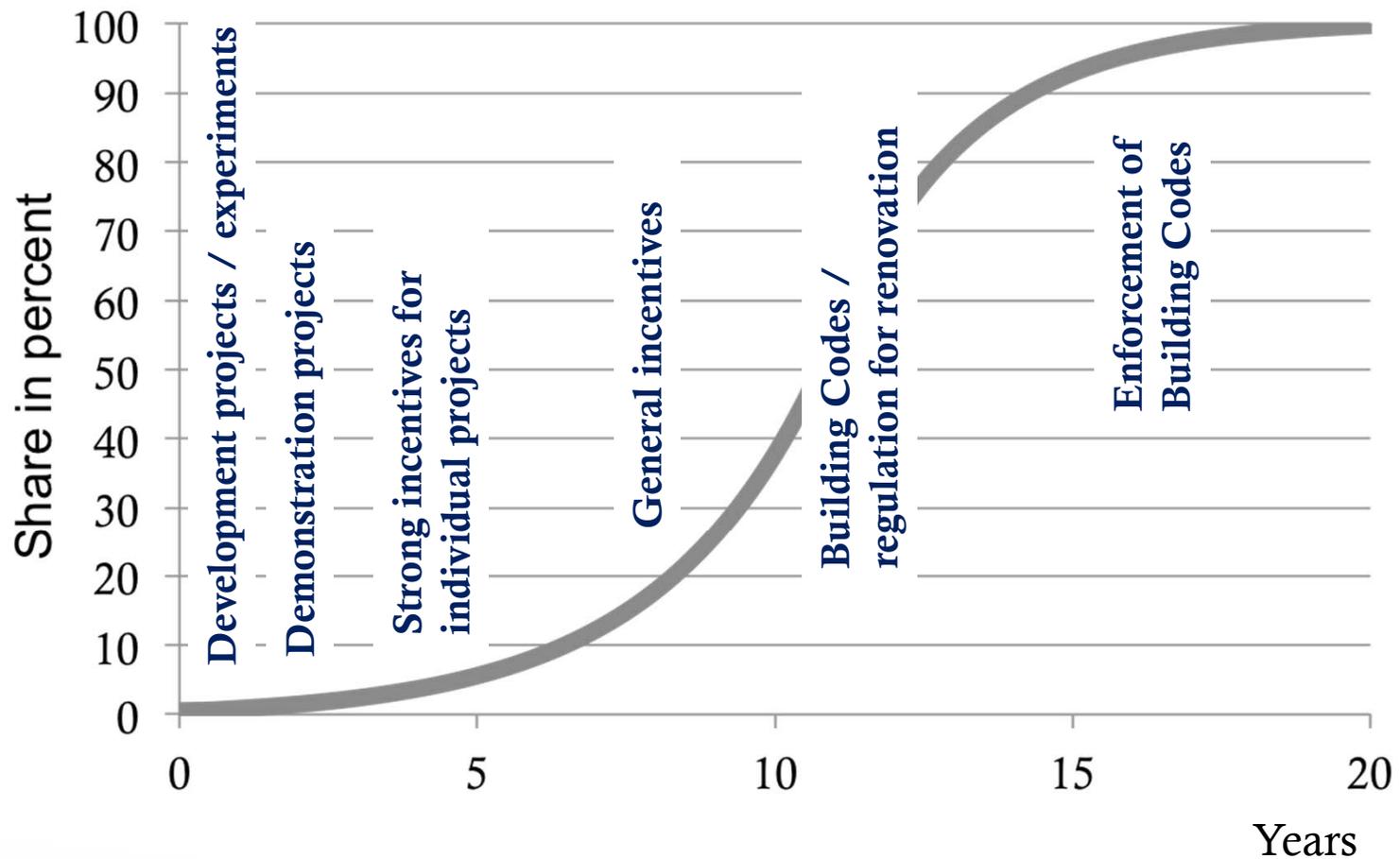
Implementing Deep Scenario
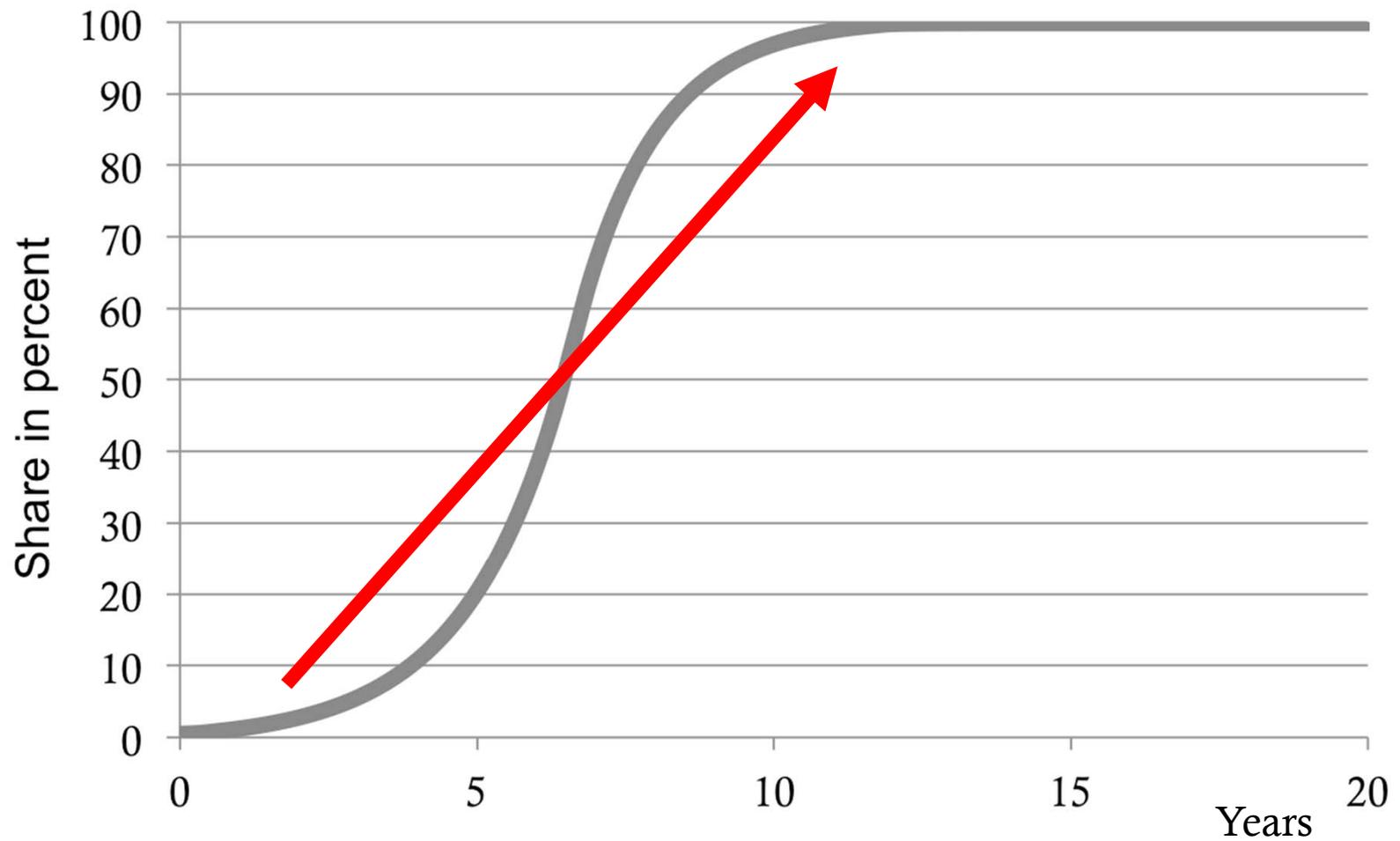
# Influencing Policy Development With Information on Best Preactice

Where are the best polices?

BUILDING ENERGY EFFICIENCY: BEST PRACTICE POLICIES AND POLICY PACKAGES
October 2012

Where are the 'savings' ?

BEST PRACTICE POLICIES FOR LOW CARBON & ENERGY BUILDINGS
BASED ON SCENARIO ANALYSIS
May 2012

What's happening in Asia?

BUILDING ENERGY EFFICIENCY POLICIES IN CHINA
July 2012
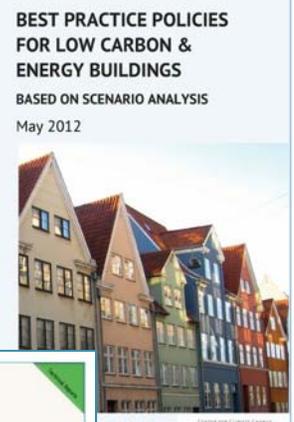
What is the state of the art?

MITIGATION POTENTIAL FROM INDIA'S BUILDINGS
February 2013

A COMPARATIVE ANALYSIS OF BUILDING ENERGY EFFICIENCY POLICIES FOR NEW BUILDINGS
February 2013

Where is the Data?

ROBUST BUILDING DATA: A DRIVER FOR POLICY DEVELOPMENT
February 2013
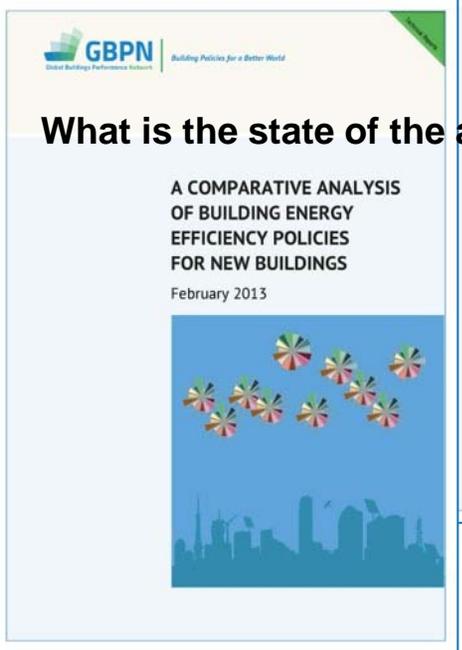
What does business think ?

Energy efficiency and energy savings
A view from the building sector
A report from the Economist Intelligence Unit
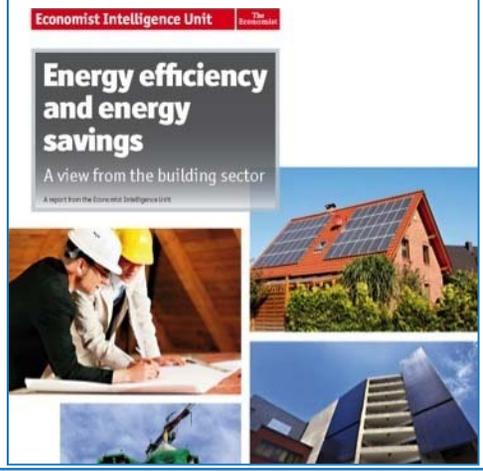
Background

"On-going research to Up Scale Deep Renovation –

Existing Building Milestone for the GBPN"

- Report - "What is a deep renovation"?

- Developed - set of state of the art criteria for an energy renovation policy package

- Interactive online renovation policy package comparison tool

- Webinar series on "how to" implement a successful policy package

- Paper- practical implementation and development guidelines

- Case Study – deep dive into

Overview

- Rationale

- GBPN Policy Comparative Tool for Existing Buildings
  - Methodology
  - Key results

- Overall Performance –success story of two front-runners in Energy Renovation Policies

- Upcoming webinars

Rationale for Webinar Series

"How to" develop best practice building energy renovation policiy packages?

Webinar series sets out to explain:

- How have countries practically implemented such best practices?

- What challenges and opportunities have been faced?

- What are the key lessons learned?

- Key drivers and success factors for going deep?

- How can these best practices be transferred?

GBPN Policy Comparative Tool

- **Identifies 6 key themes and 14 elements in a state of the art policy package**

- **Analyses and compares 12 best practice renovation policy packages**
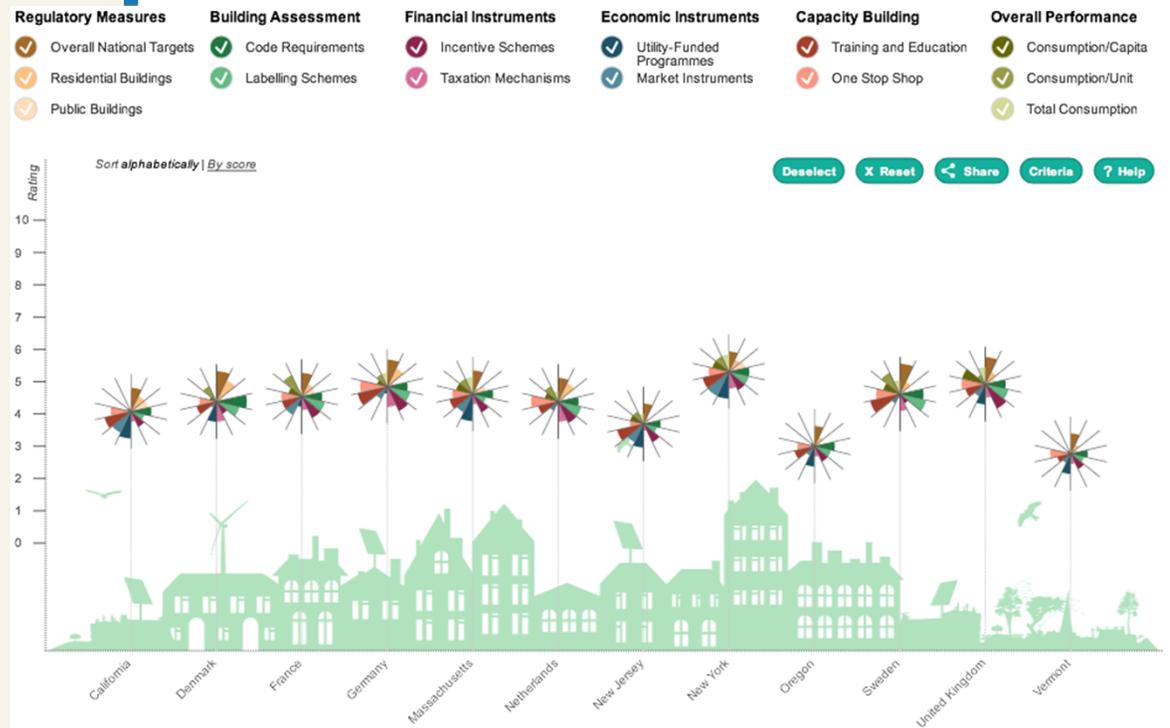
Methodology – State of the Art Criteria

| Regulatory Measures	Building Assessment	Financial Instruments	Economic Instruments	Capacity Building	Overall Performance
Overall National Targets	Code Requirements	Incentive Schemes	Utility-Funded Programmes	Training and Education	Consumption/Capita
Residential Buildings	Labelling Schemes	Taxation Mechanisms	Market Instruments	One Stop Shop	Consumption/Unit
Public Buildings					Total Consumption

- Literature Review

- Expert Input

- Peer review process

New York

Regulatory Measures
- 5 Overall National Targets
- 3 Residential Buildings
- 4 Public Buildings

Building Assessment
- 5 Code Requirements
- 5 Labelling Schemes

Financial Instruments
- 5 Incentive Schemes
- 4 Taxation Mechanisms

Economic Instruments
- 7 Utility-Funded Programmes
- 7 Market Instruments

Capacity Building
- 7 Training and Education
- 5 One Stop Shop

Overall Performance
- 4 Consumption/Capita
- 4 Consumption/Unit
- 4 Total Consumption

Sweden

Regulatory Measures
- 8 Overall National Targets
- 3 Residential Buildings
- 1 Public Buildings

Building Assessment
- 6 Code Requirements
- 7 Labelling Schemes

Financial Instruments
- 2 Incentive Schemes
- 4 Taxation Mechanisms

Economic Instruments
- 0 Utility-Funded Programmes
- 2 Market Instruments

Capacity Building
- 8 Training and Education
- 6 One Stop Shop

Overall Performance
- 4 Consumption/Capita
- 6 Consumption/Unit
- 3 Total Consumption

Methodology – Identifying Best Practice Jurisdictions

Regulatory Measures	Building Assessment	Financial Instruments	Economic Instruments	Capacity Building	Overall Performance
○ Overall National Targets	○ Code Requirements	○ Incentive Schemes	○ Utility-Funded Programmes	○ Training and Education	✔ Consumption/Capita
○ Residential Buildings	○ Labelling Schemes	○ Taxation Mechanisms	○ Market Instruments	○ One Stop Shop	✔ Consumption/Unit
○ Public Buildings					✔ Total Consumption

- Literature Review

- Expert Input

- Consumption Analysis

- Peer Review

Change in Energy Consumption
(Base year equals 100)

Consumption

Europe · New York · Sweden · United States
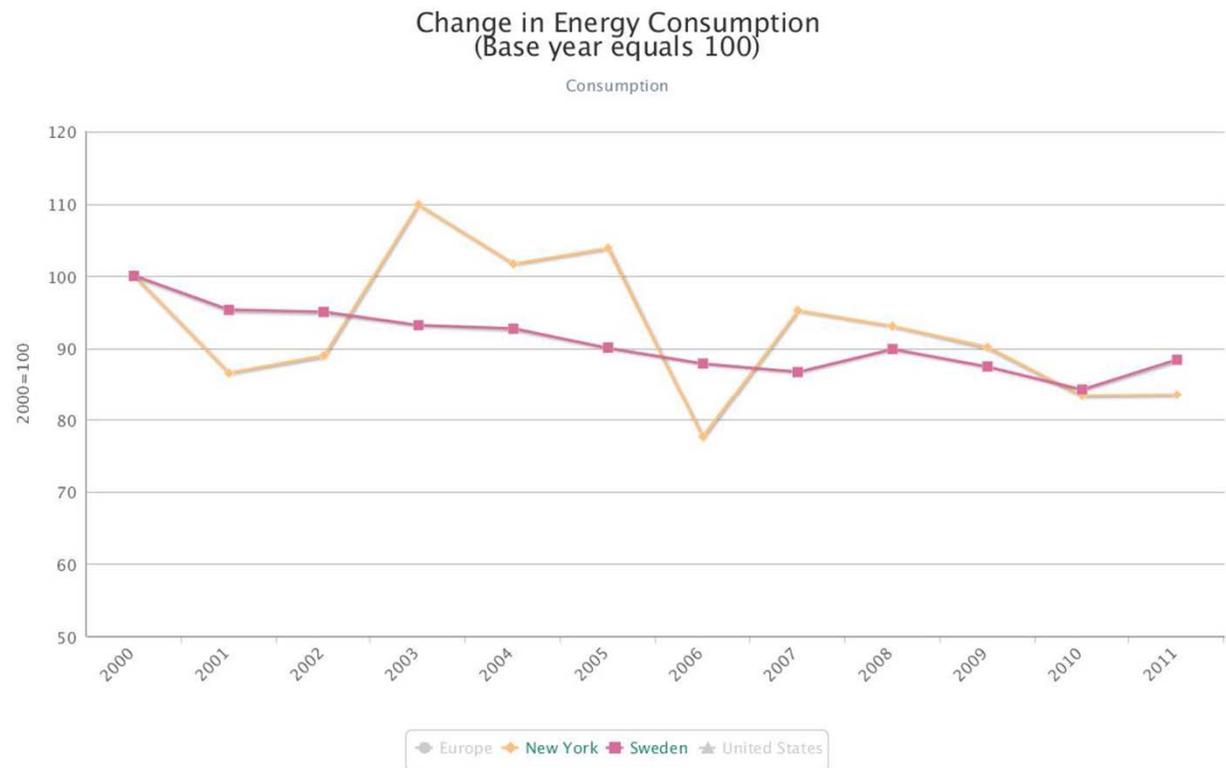
Key Findings from the Tool

1. Emerging field.

2. Holistic policy packages in place

3. There is no such thing as an overall "best" policy package

4. Financial mechanisms need to be locally adapted

5. Absence of clear and ambitious targets for renovation

Webinar 1: Overall Performance

Change in Energy Consumption
(Base year equals 100)

Sweden

Legend: Consumption · Consumption/GDP · Consumption per Capita · Consumption per floor area · Consumption per dwelling
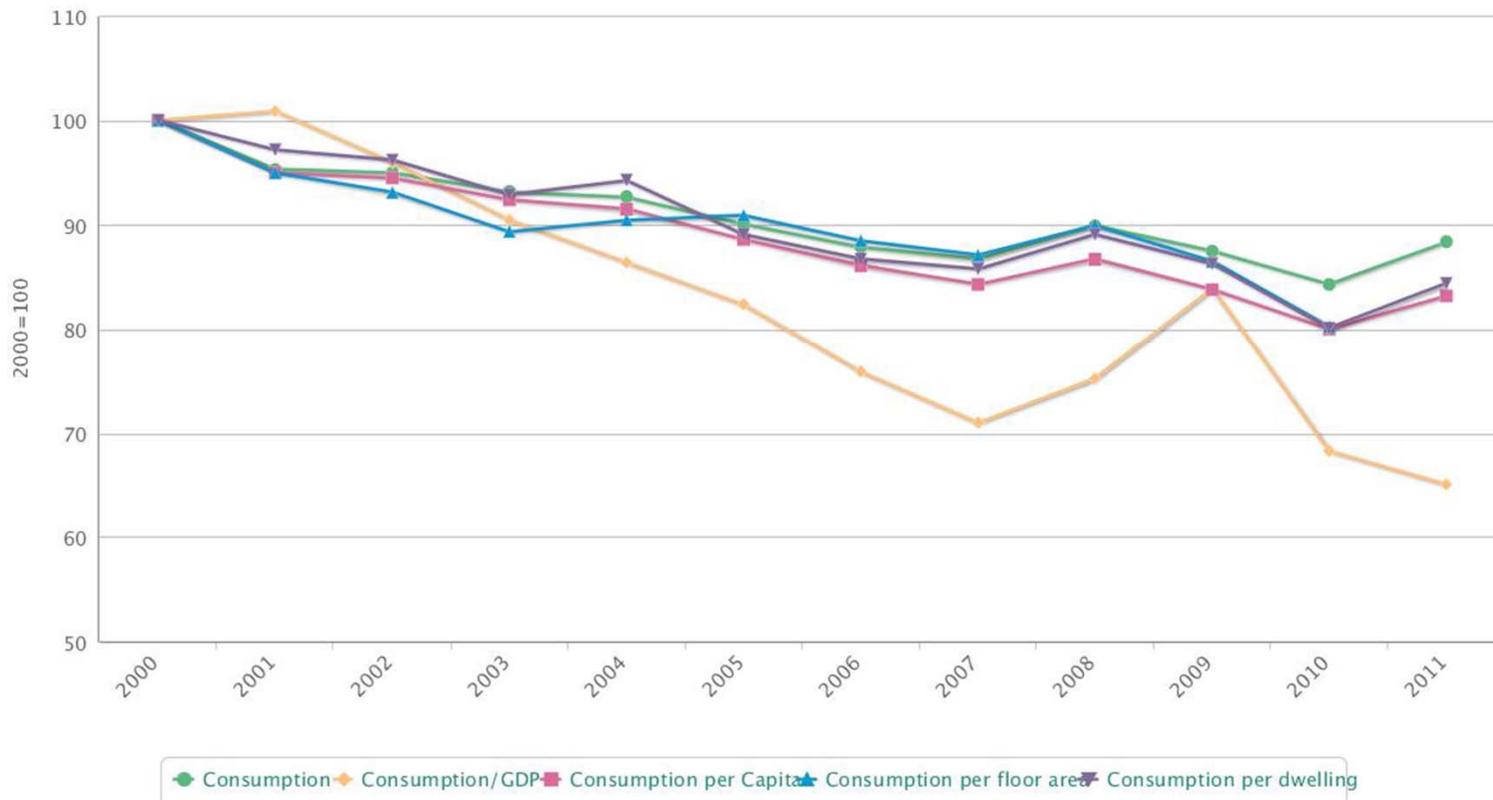
Webinar Series

- Webinar 1: How can we realise a reduction in energy consumption in the building sector using best practice policy mechanisms?

- Webinar 2: Are energy saving targets and regulatory measures essential elements in a renovation policy package?

- Webinar 3: Do labelling and certification schemes lead to greater energy reduction in the existing building stock?

- Webinar 4: How can we finance energy renovations? Insight from best practice jurisdictions on Incentives and Drivers.

Thank you!
Let's stay in touch …

Consult our web site: www.gbpn.org
Follow us on Twitter: @GBPNetwork
Send us an email: project@gbpn.org