

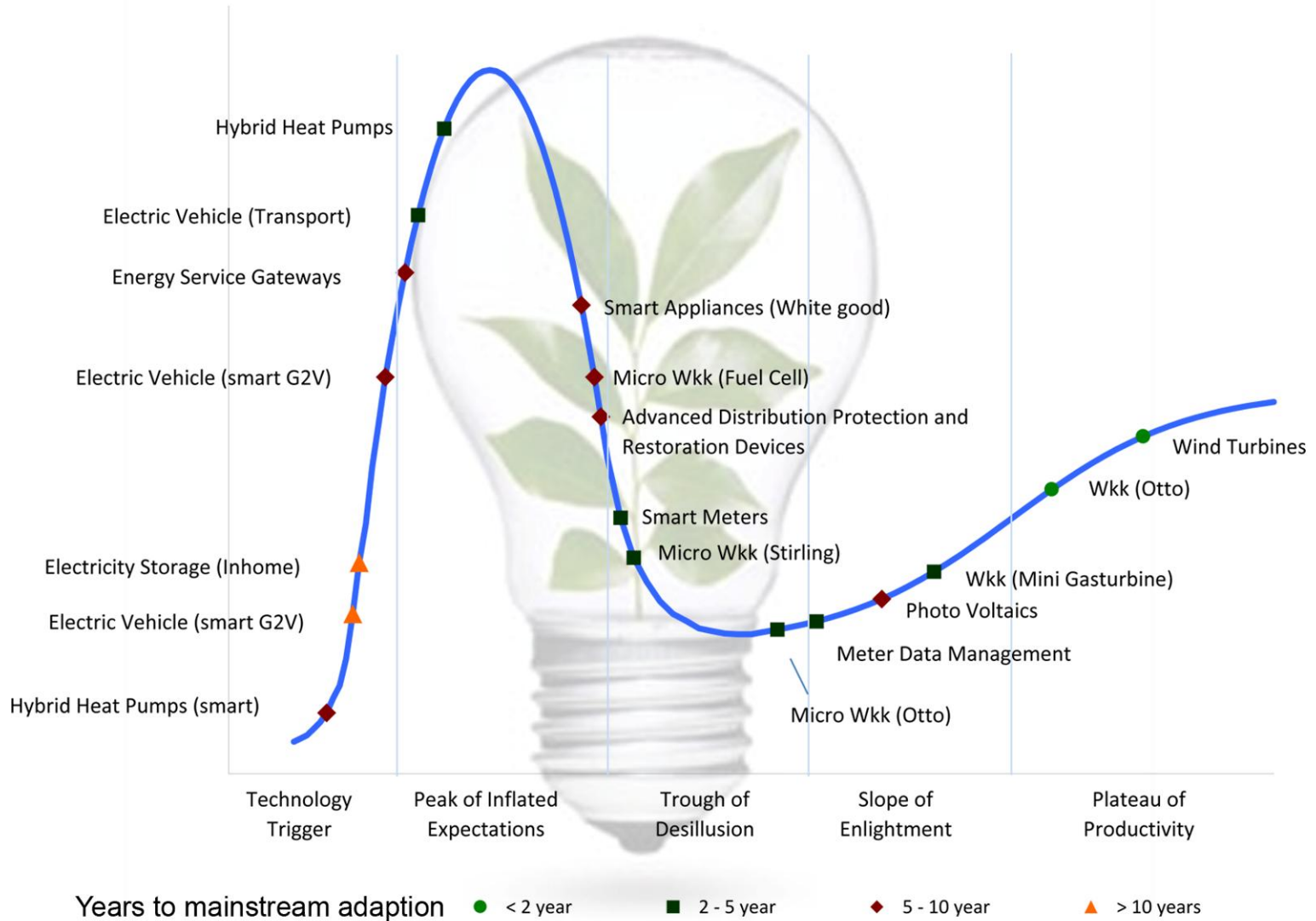


# Smart Grid

The role of natural gas in smart grids  
*experiences from a demonstration project*

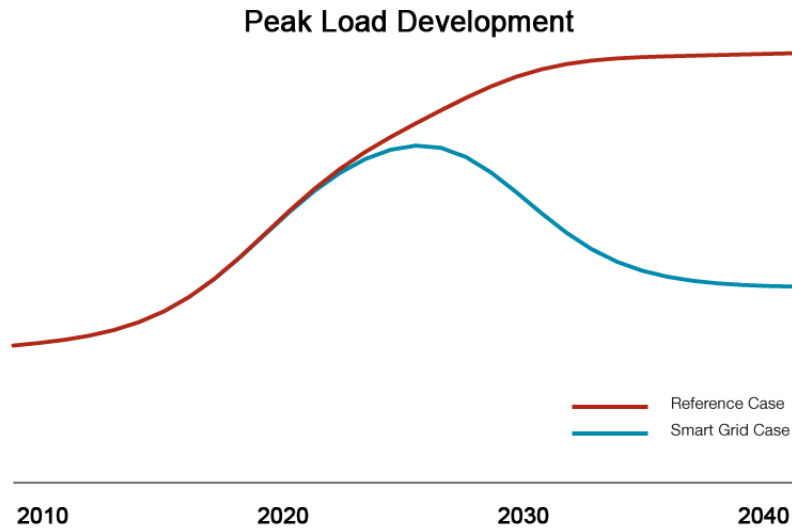
IGRC  
Seoul, October 20<sup>th</sup> 2011  
Dr. Frits W. Bliiek

# Technology Developments



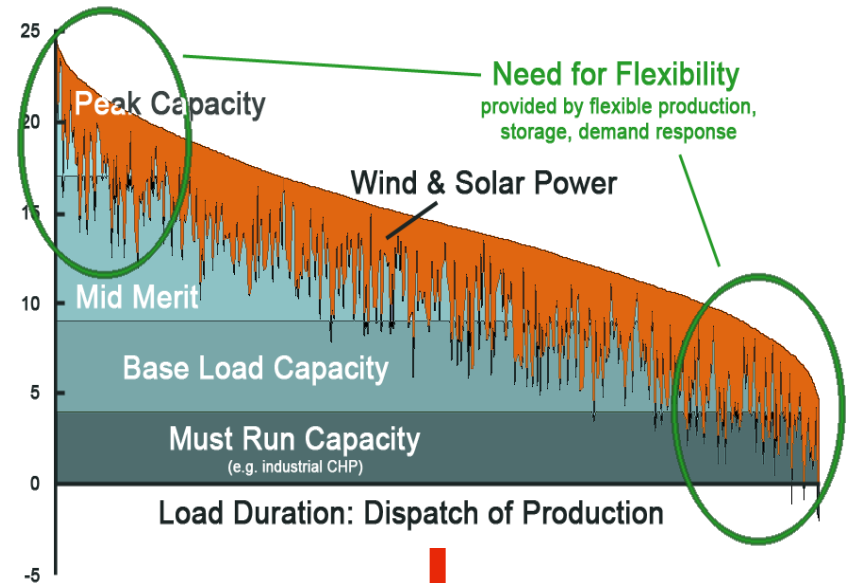
# Business Drivers

## The Grid Perspective



**Need for Capacity Management**

## The Commodity Perspective



**Need for Flexibility**

# PowerMatching City *a smart grid demonstration*

## Intermittent Renewable Energy



## Smart Charging Electric Vehicles



## Sustainable Heating Solutions

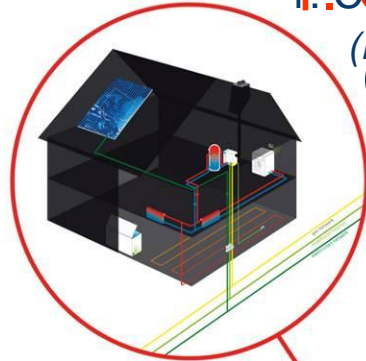


## Smart Appliances



# Multi Goal Optimization

1. Cost Effective Use of Energy  
(In home optimization)



4. Integration of Renewable Energy  
(Valorisation and Imbalance Reduction)



3. Commercial Optimization  
(Virtual Power Plant)

2. Capacity Management  
(reduce peak loads)



# Smart Grid for the real world



**Thank you for  
your attention**

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