

# Dealing with uncertainties in long term energy scenarios

What we do at the Danish Energy Agency and why

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#### It's difficult to make predictions – especially about the future

But predictions are used all the time when making political decisions..

How can we convey uncertainties and improve our energy scenarios?



### Three types of uncertainties



uncertainty

Development - Projections of human behavior - Changes in societal preferences



Model

uncertainty

Data uncertainty

- Misrepresented relationships - Important parameters left out

- Missing data - Inaccurate data

#### Three types of uncertainties



### Three types of uncertainties

न्हिन्दिन	Development uncertainty	- Projections of human behavior - Changes in societal preferences	Use of scenarios with only one parameter change at a time (sensitivity analysis) Scenarios based on workshops with a range
ŶţŶ ZŢ	Model uncertainty	- Misrepresented relationships - Important parameters left out	of people with different perspectives "Hand-held" calibrations
	Data uncertainty	- Missing data - Inaccurate data	Talking to stakeholders and technical experts   Public hearing of assumptions

What we try to do at DEA

## Thanks for listening



#### Energiforbrug til opvarmning i boliger

Indeks 1990= 100 Klimakorrigeret

