

PROCUREMENT POLICY: THE ROLE OF RE AUCTIONS

HOW RE AUCTIONS CAN DISCOVER
RE MARKET PRICES, PROMOTE
INVESTMENT, AND ACHIEVE OTHER
RE POLICY GOALS

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ECOFYS

The logo for ECOFYS, featuring the company name in a bold, blue, sans-serif font. Below the name is a green graphic element consisting of a curved line that starts under the 'E' and ends under the 'S', resembling a stylized wave or a swoosh.

A Navigant Company

OUTLINE

1. Why auctions
2. Definition of renewable energy (RE) auctions
3. Overview of design elements
4. Advantages and disadvantages of auctions
5. Key messages

1. WHY AUCTIONS

Guiding question for presentation:
Under which conditions are auctions able to meet these objectives?

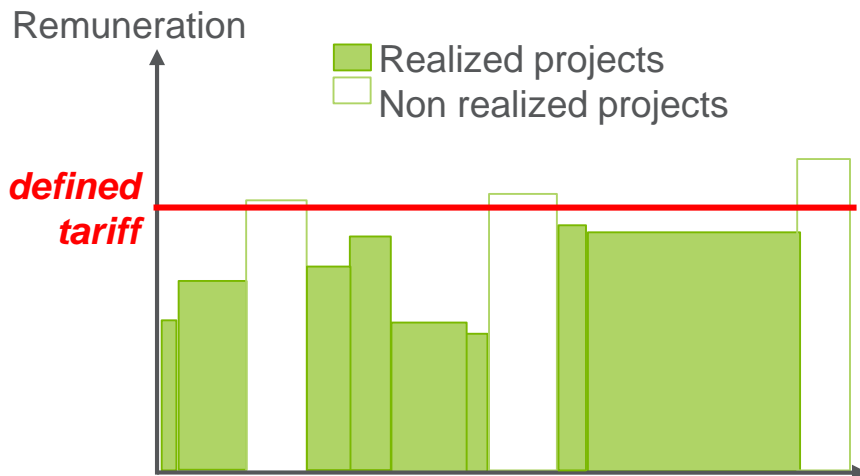
Policy goals:

- Contract the cheapest RE projects possible
- Allocate available funding efficiently
- Reliably achieve RE target (per technology)
- Create attractive investment conditions
- Achieve other policy goals like
 - Contract projects with a positive (local) socio-economic impact
 - Guarantee a certain regional distribution of generation facilities (e.g. for grid concerns)
 - Maintain or achieve a certain mix of market players

2. DEFINITION OF RE AUCTIONS

Administratively set tariff

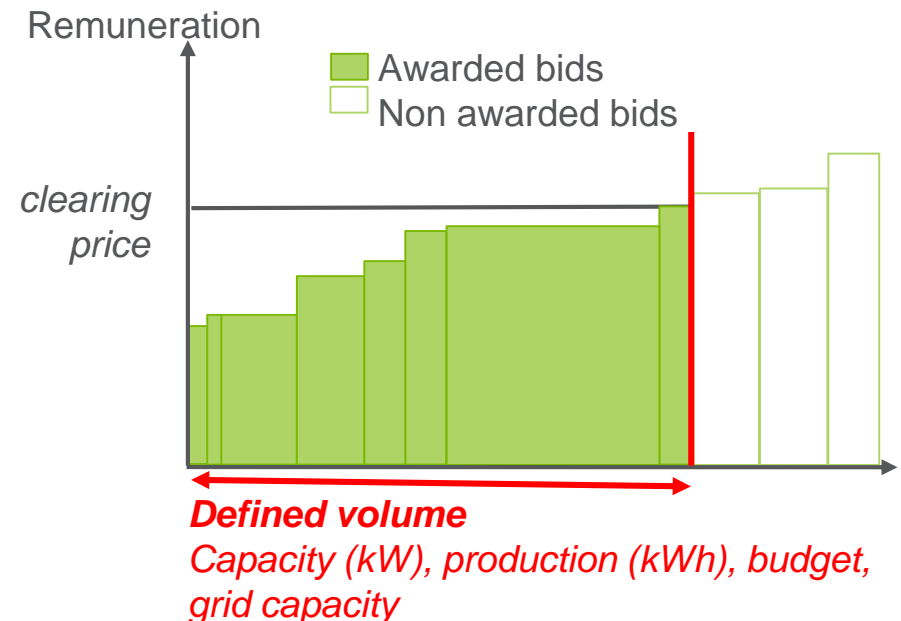
- „Government sets price, market determines volume“



- E.g. Indonesia (biomass, biogas < 10 MW), Malaysia, Philippines, Thailand, Vietnam

PPA-auction/competitively set tariff

- „Government sets volume, market determines price“



- E.g. Indonesia (solar PV, wind), Malaysia (solar PV), Thailand (biomass, biogas)

3. OVERVIEW OF DESIGN ELEMENTS

General design elements

**Auction
procedure**

**Conditions for
participation**

**Deadlines and
penalties**

Institutions

3. OVERVIEW OF DESIGN ELEMENTS

General design elements

technology type, technology size, auctioned item (kWh, KW, budget), multi vs. single-item auction

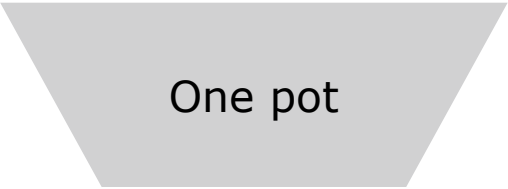
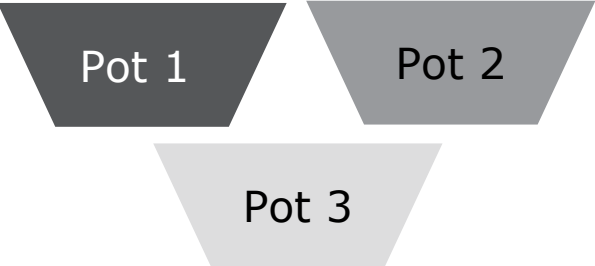
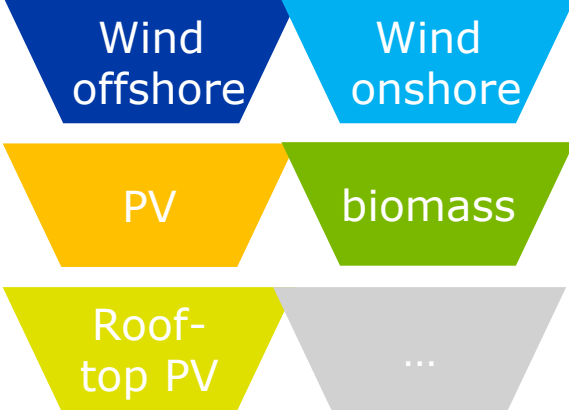
**Auction
procedure**

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3. GENERAL DESIGN ELEMENTS: ELIGIBLE TECHNOLOGIES

Technology neutral	Grouped	Technology-specific
		
<p>Netherlands All RE including heat Also Mexico</p>	<p>California Three groups: baseload, peaking-as-available, and non-peaking as available Also UK</p>	<p>Germany Wind offshore, wind onshore, biomass, solar PV separated Also Thailand, Malaysia, Indonesia</p>

3. OVERVIEW OF DESIGN ELEMENTS

General design elements

technology type, technology size, auctioned item (kWh, KW, budget), multi vs. single-item auction

Auction Procedure

static vs. dynamic auctions, ceiling price, selection criteria, pricing rule, number of rounds

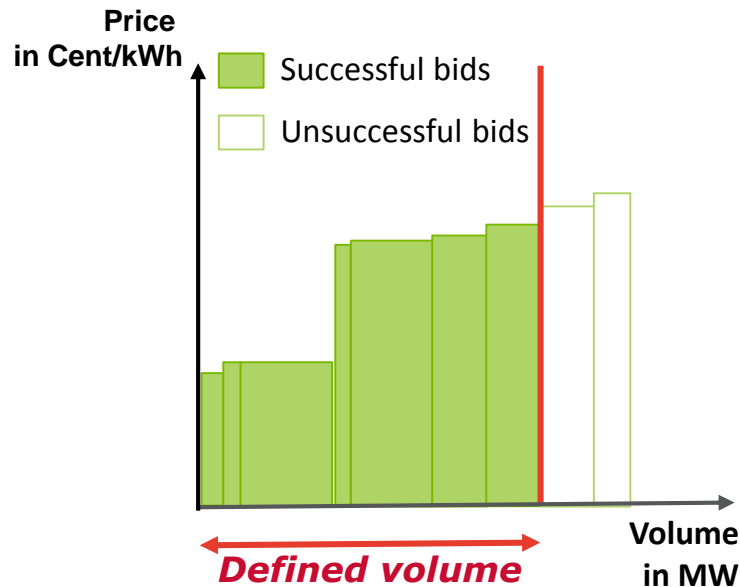
Conditions for participation

Deadlines and penalties

Institutions

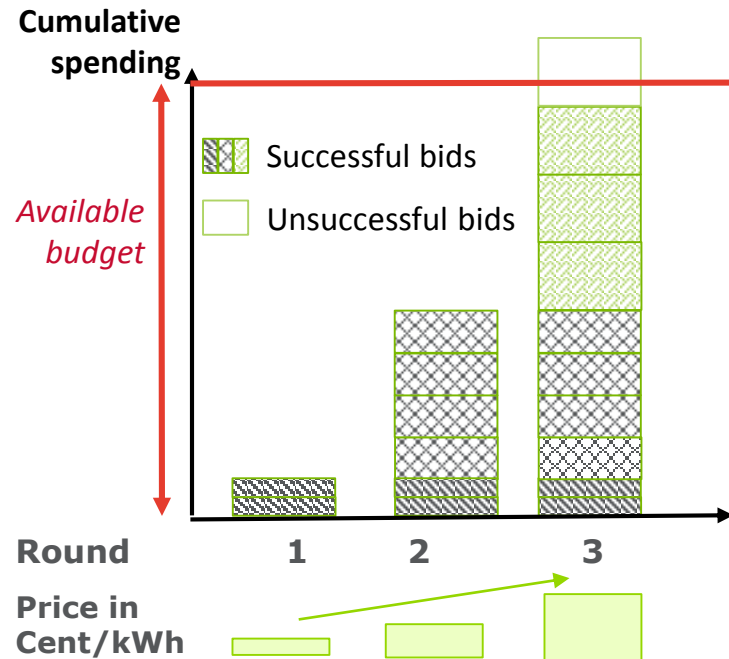
3. AUCTION PROCEDURE: STATIC AND DYNAMIC AUCTIONS

Static auction (e.g. „sealed bid“)



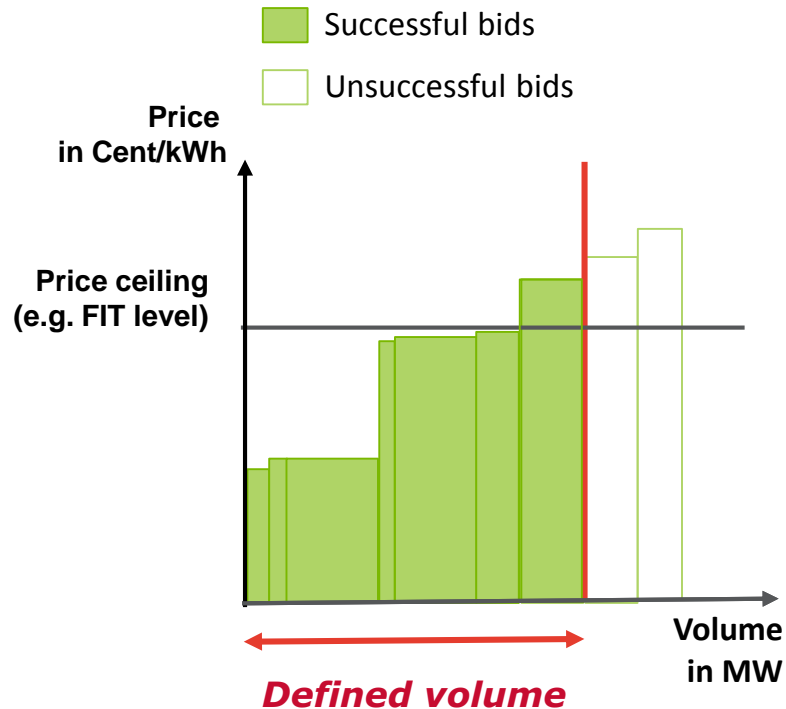
Most countries including **Thailand, Malaysia, Indonesia, Brazil phase II**

Dynamic auction („ascending clock“)



Selected countries including **Netherlands, Brazil phase I (descending clock)**

3. AUCTION PROCEDURE: EFFECT OF CEILING PRICES



- Too expensive projects are excluded
- Helps to control impact on national treasury/funding sources

3. OVERVIEW OF DESIGN ELEMENTS

General design elements

technology type, technology size, auctioned item (kWh, KW, budget), multi vs. single-item auction

Auction Procedure

static vs. dynamic auctions, price, selection criteria, pricing rule, number of rounds

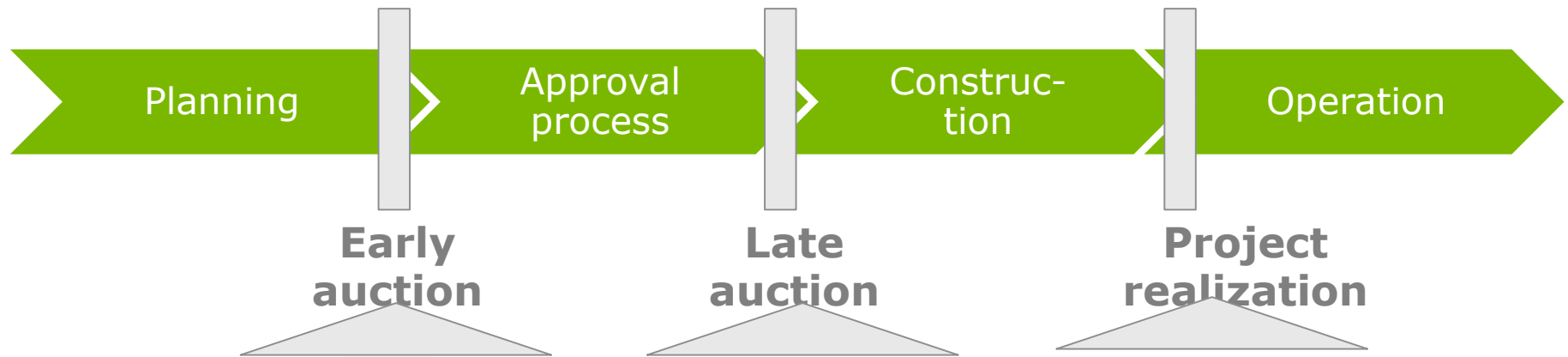
Conditions for participation

timing of the auction, technical requirements, financial bid bonds

Deadlines and penalties

Institutions

3. CONDITIONS FOR PARTICIPATION, DEADLINES, AND PENALTIES



Conditions for participation

- + Technical: Selection of projects with sufficient progress in planning
- + Financial: Bidders with intention to realize
- Technical: Sunk costs
- All: Prohibitive barrier for (some) bidders

Deadlines and penalties

- + Incentive to realize due to penalties
- Risk for bidders increases
- Prohibitive barrier for (some) bidders

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Conditions for participation

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Deadlines and penalties

Institutions

3. INSTITUTIONS

- Who drafts the auction regulation?
- Who carries out the auction?
- Who oversees issuing permits/licenses?
- Who commissions the awarded projects?
- Who pays awarded projects (contract off-taker)?

4. ADVANTAGES AND DISADVANTAGES OF RE AUCTIONS

Advantages

- The market reveals the price of RE
- Competitive pressure incentives cost reductions
- The RE target can be reliably achieved

Disadvantages

- High level of participation required for meaningful competition

4. EXAMPLE FROM GERMANY

- Problem:
 - Fear of low participation due to strict conditions of participation, particularly by smaller market players
- Solution:
 - Bidder can split the bid bond in two
 - If projects were more advanced in terms of technical planning, bid bond is halved
- Trade-off
 - Fears of lower realization rates (did not materialize)

4. ADVANTAGES AND CHALLENGES OF RE AUCTIONS

Advantages

- The market reveals the price of RE
- Competitive pressure incentives cost reductions
- The RE target can be reliably achieved

Disadvantages

- High level of participation required for meaningful competition
- Timely realization not guaranteed

4. EXAMPLE FROM BRAZIL

- Problem:
 - Delayed realization as bidders could not secure grid connection on time
- Solution:
 - Stricter technical requirements were defined
 - Since 2013, bidders had to secure the grid connection before the auction
- Trade-off
 - Stricter pre-qualification requirements might have led to higher bid prices

4. ADVANTAGES AND CHALLENGES OF RE AUCTIONS

Advantages

- The market reveals the price of RE
- Competitive pressure incentives cost reductions
- The RE target can be reliably achieved

Disadvantages

- High level of participation required for meaningful competition
- Timely realization not guaranteed
- Likelihood of winners curse
- Administrative costs and new risks for bidders

4. EXAMPLE FROM GERMANY

- Problem:
 - Several bidders excluded in the first rounds due to formal errors
- Solution:
 - Regulator updated the information available on the website
 - Public information events

4. EXAMPLE FROM BRAZIL

- Problem:
 - Insufficient financing resources from private banks
- Solution:
 - Preferential loans from state-owned banks for wind project developers

5. KEY MESSAGES

- Auctions are a way of competitively procuring renewable energy: the government defines the volume, while the market sets the price
- Policy makers have to *understand* the policy goals and the market environment to decide whether auctions are suitable or not
- Policy makers have to *adapt the auction design* to the policy goals and the market environment as there is no one-size-fits-all solution
- When doing so, make sure that the rules are clear, transparent, and easy to understand
- Auctions are *not silver bullet* to achieve everything at the same time



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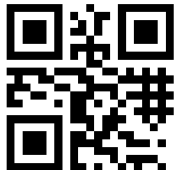
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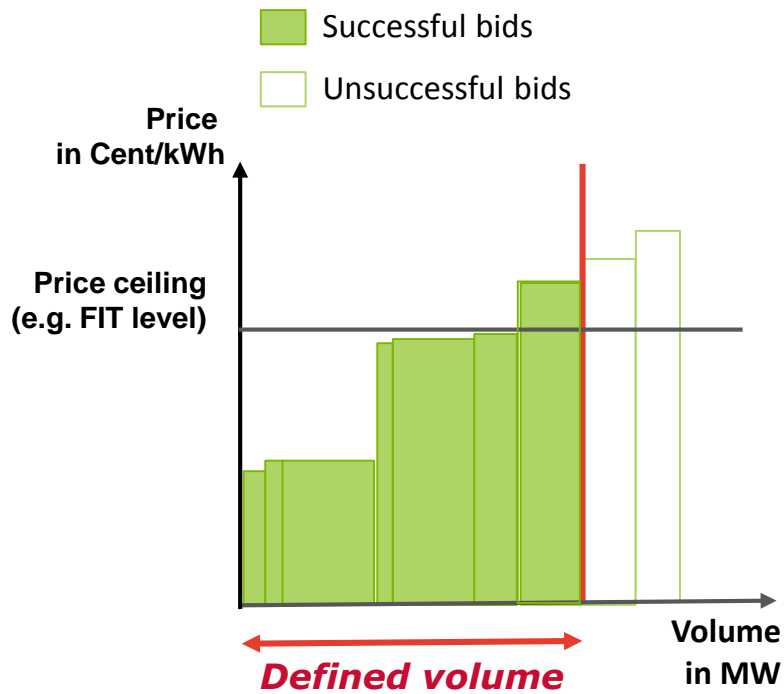


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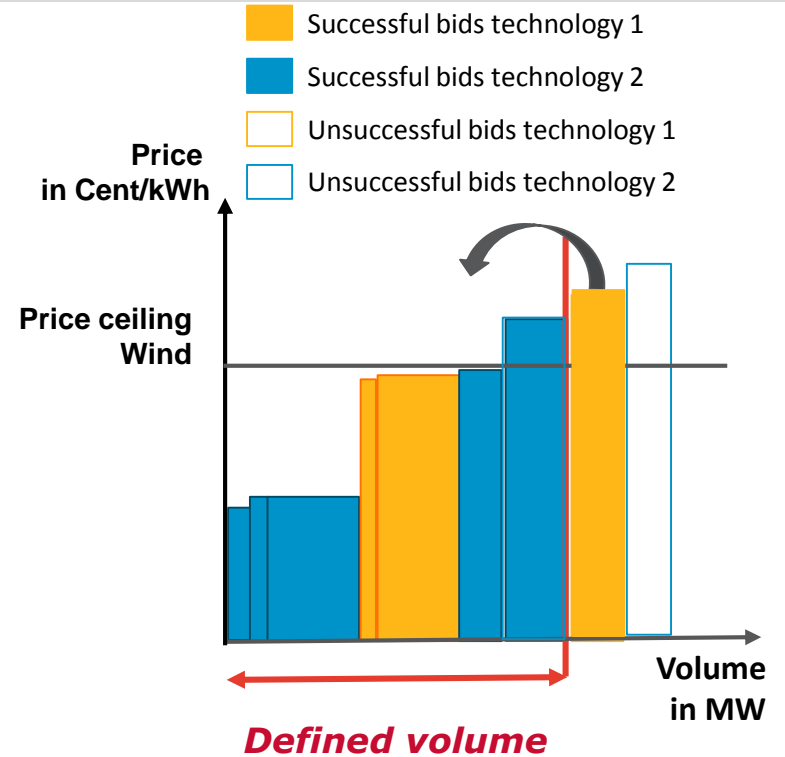


AUCTION PROCEDURE: EFFECT OF CEILING PRICES

No ceiling price vs. with ceiling price

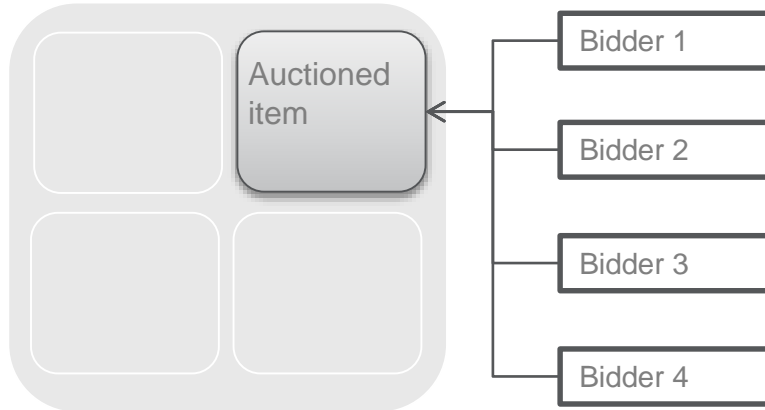


With ceiling price per technology



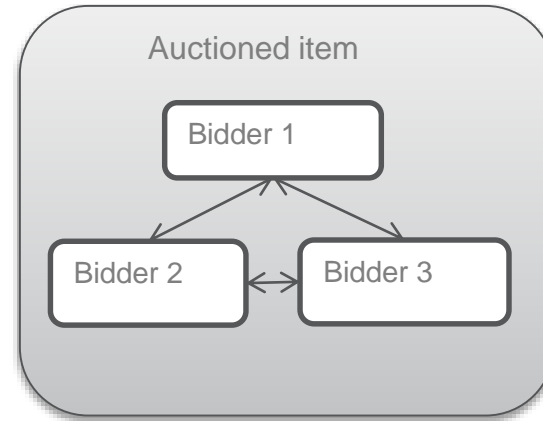
SINGLE- AND MULTI-ITEM AUCTIONS

- Single-item (side-specific) auctions



- Observed for large technologies with restricted availability of locations, particularly offshore and geothermal

- Multiple-item auction



- Observed for smaller technologies with many actors, particularly solar and wind onshore