



Two issues with trading at Estonian price area of Nord Pool Spot



Agenda

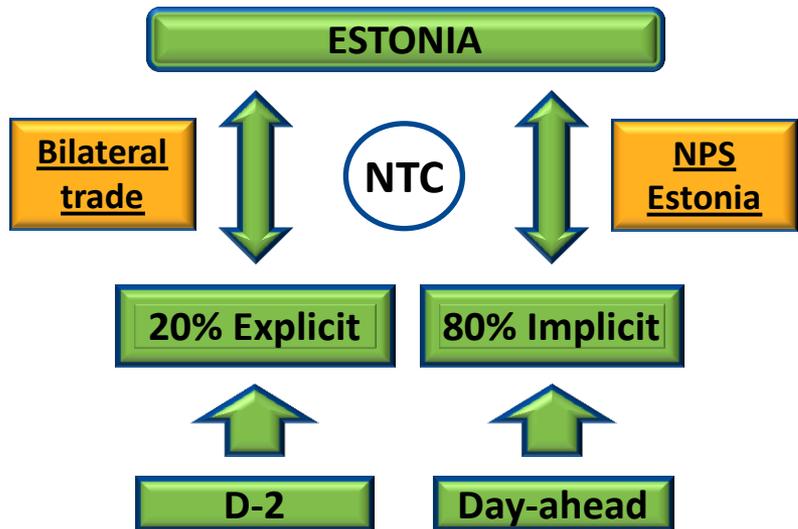
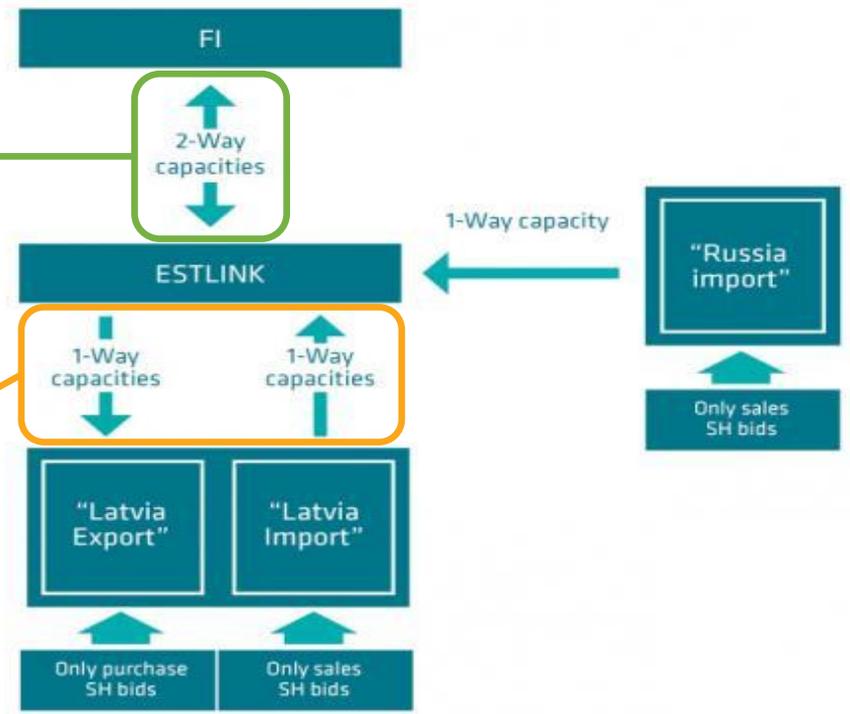
1. Capacity allocation and optimization problem between EE and LV
2. Demonstration of sub-optimal capacity allocation between EE and LV
3. Price transparency problem at Estonian price area of NPS
4. Demonstration of price transparency problem at Estonian price area of NPS
5. Possible suggestions for solving mentioned problems



1. Capacity allocation and optimization problem between EE and LV

Transfer capacity netting mechanism, utilized by Nord Pool Spot increases the usage of cross border capacity and reduces the auctioneer's incentive to withhold capacity from the auction.

Cross border transfer capacity between Estonian / Latvian electricity transmission systems is determined by exercising two separate capacity allocation auctions - one in each direction (i.e. EE-LV and LV-EE).



The problem of scarce cross border capacity between Estonia and Latvia is aggravated by the fact that only 80% of net transfer capacity (NTC) is allocated for trades which participate at the Nord Pool Spot (NPS).

Other 20% of net transfer capacity (NTC) are reserved for bilateral trades. Since capacity on explicit auctions has to be bought not later than two days before actual transmission of electricity takes place, this system creates additional administrative challenges for traders.

2. Results of EE-LV cross border capacity allocation on 29-06-2011

29-06-2011	Planned transfer capacities				Capacity used (planned commercial flows)	Physical flows
	EE-LV		LV-EE		export (+), import (-) EE-LV	out of Estonia (+), into Estonia (-)
Time	NTC	ATC	NTC	ATC	AAC	EE-LV
00:00-01:00	650,0	418,4	700,0	700,0	231,6	288,3
01:00-02:00	650,0	393,0	700,0	700,0	257,0	275,9
02:00-03:00	650,0	383,4	700,0	700,0	266,6	275,5
03:00-04:00	650,0	399,2	700,0	700,0	250,8	273,3
04:00-05:00	650,0	420,8	700,0	700,0	229,2	248,1
05:00-06:00	650,0	319,8	700,0	700,0	330,2	265,0
06:00-07:00	650,0	61,2	700,0	700,0	588,8	324,8
07:00-08:00	650,0	60,0	700,0	700,0	590,0	352,0
08:00-09:00	650,0	51,7	700,0	700,0	598,3	393,1
09:00-10:00	650,0	53,9	700,0	700,0	596,1	366,6
10:00-11:00	650,0	54,5	700,0	700,0	595,5	375,8
11:00-12:00	650,0	53,6	700,0	700,0	596,4	371,7
12:00-13:00	650,0	52,1	700,0	700,0	597,9	383,0
13:00-14:00	650,0	51,6	700,0	700,0	598,4	433,4
14:00-15:00	650,0	11,9	700,0	700,0	638,1	423,2
15:00-16:00	650,0	11,6	700,0	700,0	638,4	452,9
16:00-17:00	650,0	9,4	700,0	700,0	640,6	520,6
17:00-18:00	650,0	7,2	700,0	700,0	642,8	474,2
18:00-19:00	650,0	5,4	700,0	700,0	644,6	414,9
19:00-20:00	650,0	3,9	700,0	700,0	646,1	362,4
20:00-21:00	650,0	12,8	700,0	700,0	637,2	372,8
21:00-22:00	650,0	27,2	700,0	700,0	622,8	414,4
22:00-23:00	650,0	81,3	700,0	700,0	568,7	399,1
23:00-24:00	650,0	276,6	700,0	700,0	373,4	350,3

Weekly explicit auction calendar

Year	Week	Date of auction	Offered capacity (MW)	
			EE-LV	LV-EE
2011	26	21.06.2011	130	140

Weekly explicit auction results

EE-LV			LV-EE		
Sold (MW)	Price (EUR)	Participants (total nr)	Sold (MW)	Price (EUR)	Participants (total nr)
130	3057,6	3	140	0	3

20% of net transfer capacity (NTC) was successfully auctioned via explicit auction; however, it is not clear whether all this capacity was actually used.

Usually only fraction of net transfer capacity (NTC) between EE and LV is available for traders who are willing to buy electricity at Estonian price area of NPS and import it to Latvia / Lithuania.

Since physical flows are always less than net transfer capacity (NTC), the capacity allocation is inefficient and should be optimized.

Cross-border capacity could be utilized more effectively if:

- 1) Transfer capacities between EE and LV are netted.
- 2) All 100% of NTC is allocated via implicit auction.

3. Price transparency problem at Estonian price area of NPS

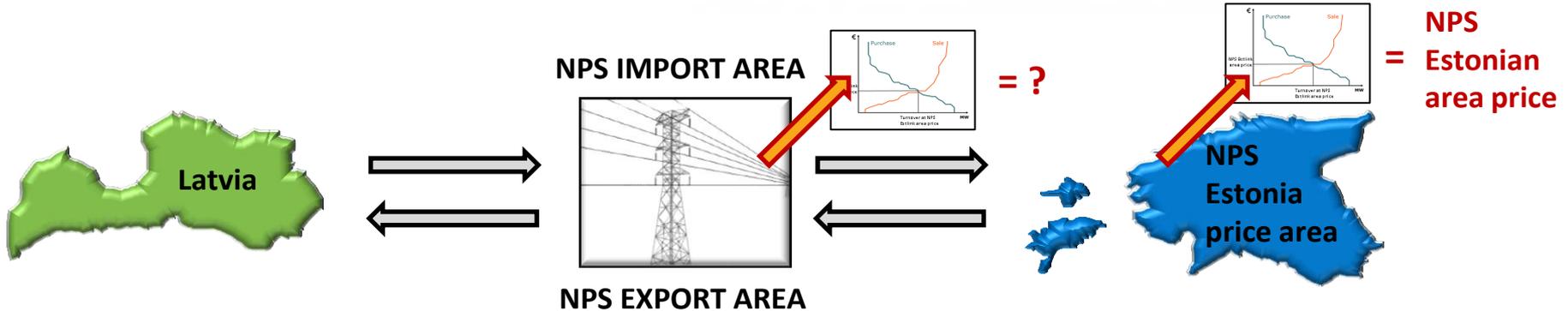
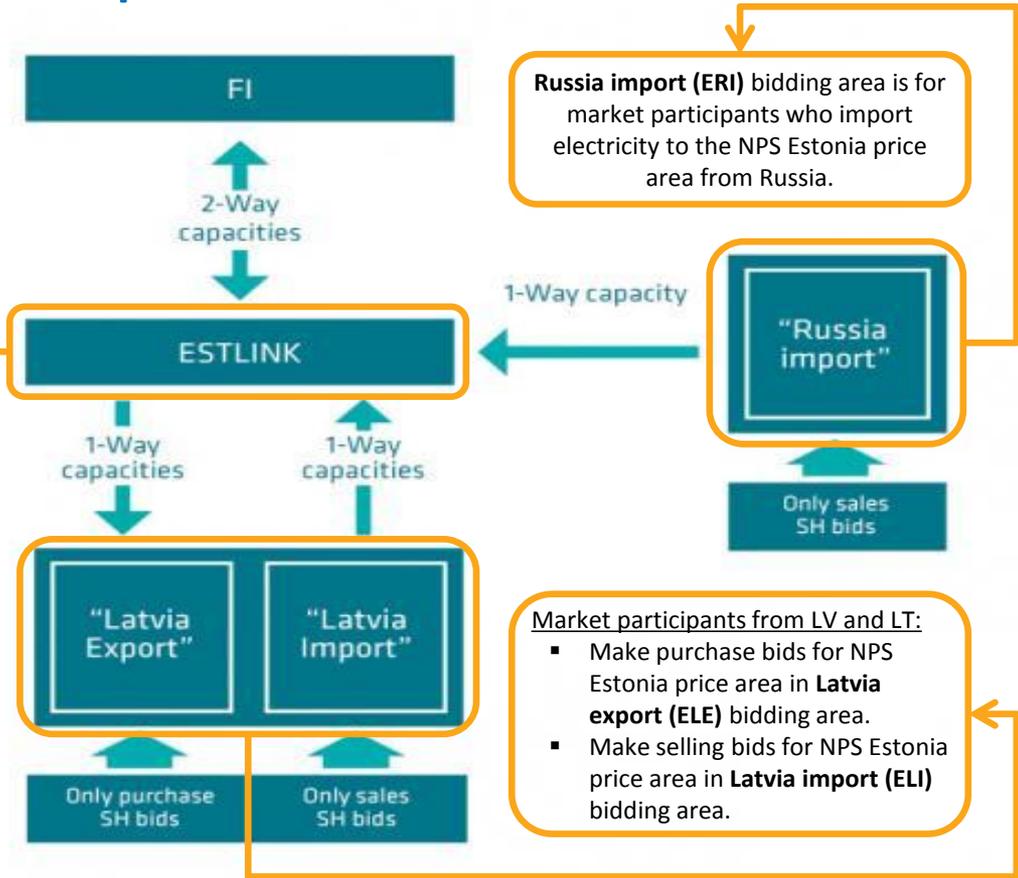
Price settlement in NPS Estonia area

The price of electricity at Estonian price area of Nord Pool Spot for each hour is determined by the intersection of the aggregate supply and demand curves at Estonian bidding area.

Estonia bidding area is used by Estonian market participants for making both purchase and selling bids.

Price settlement in NPS import and export areas

Usually the equilibrium price in ELE, ELI and ERI bidding areas differs from the Estonian area price, but according to the rule all power traded in the export and import areas is settled to a single price of NPS Estonia.



4. Results of trading at Estonian price area of NPS on 29-06-2011



Bid: 1761_ELE_1420_2011062822
Area: ELE
Status: Results published

Trading results report

Reporting period 29.06.2011-30.06.2011
Date 28.06.2011
Account EE-LE-ELE
Participant Lietuvos Energija AB
Currency EUR
Area ELE

The purchase bid in ELE (Export to Latvia) bidding area was set at 59.00 EUR/MWh, whereas MAX price at Estonian price area was settled only at 53.19 EUR/MWh.

Hour/Price	
1	59,0
2	0,0
3	0,0
4	0,0
5	0,0
6	0,0
7	0,0
8	xx,x
9	0,0
10	xx,x
11	xx,x
12	xx,x
13	xx,x
14	xx,x
15	xx,x
16	xx,x
17	xx,x
18	xx,x
19	xx,x
20	xx,x
21	0,0
22	xx,x
23	0,0
24	0,0
Sum	xx,x
Min	0,0
Max	xx,x

The results show that the price in ELE bidding area (which is not publically available) was definitely higher than the price in Estonian price area. Thus, most of the submitted purchase bids were not executed.

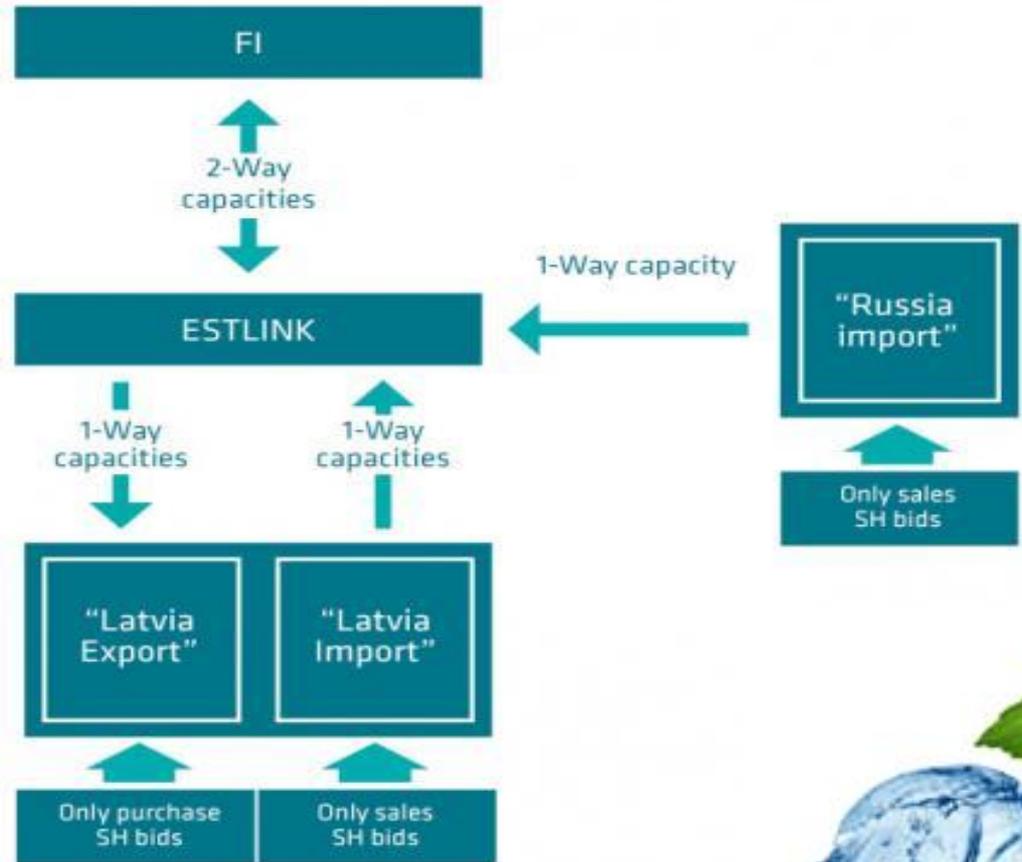
Only at 21-22h a single purchase bid was successfully executed.

Hour	Area Price EUR/MWh	Hourly volume MW
1	38.47	0.0
2	38.51	0.0
3	36.86	0.0
4	35.57	0.0
5	35.28	0.0
6	40.10	0.0
7	46.96	0.0
8	49.75	0.0
9	53.19	0.0
10	53.14	0.0
11	53.03	0.0
12	52.33	0.0
13	51.42	0.0
14	50.14	0.0
15	49.00	0.0
16	48.26	0.0
17	47.89	0.0
18	47.46	0.0
19	47.25	0.0
20	46.99	0.0
21	46.50	0.0
22	46.22	10.0
23	43.98	0.0
24	41.85	0.0
Min	35.28	0.0
Max	53.19	10.0
Sum	-	10.0
Avg	45.84	

Trading results at NPS import and export areas are not publically available – this lack of transparency should be resolved as soon as possible in order to develop a properly functioning common Baltic electricity market.

5. Possible suggestions for solving mentioned problems

- a) The prices and amounts of trade in ELE (Export to Latvia), ELI (Import from Latvia) and ERI (Import from Russia) bidding areas could be made publically available.
- b) Cross border transfer capacities between Estonia and Latvia could be netted (i.e. 2-way capacities could be enabled).
- c) Explicit capacity auctioning could be renounced and all net transfer capacity (NTC) could be allocated via implicit auction.



Developing a common Baltic electricity market shall benefit both producers and consumers of all three Countries.

