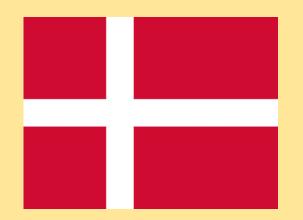


European
Workshops on
Demand Response
2022





Demand Response in Denmark

State of play, evolutions and perspectives

55 min to be Fit for 55!



Agenda









Jonas KATZ, Danish Energy Agency



Karsten FEDDERSEN



Helle JUHLER-VERDONER



Martin SALAMON



Q&A + questions on-going => in the chat box please



Demand response and the implementation of the Clean Energy Package

Sabine Crome
European Commission – DG Energy
Internal Energy Market



Relevance of demand side flexibility

- Developing demand response has lost none of its relevance, even in the current crisis
- With high energy prices, the participation of demand response in wholesale markets can be a crucial element to tackle the volatility of prices
- Demand side flexibility provides system flexibility. System flexibility is key because:
 - accelerated deployment of electricity from renewable sources
 - increased electrification of end uses



Key provisions of the Electricity Directive 2019/944

- Non-discriminatory access of demand response to <u>all</u> electricity markets, either directly or through aggregation (Art. 17)
- Full recognition of (independent) aggregators as market participants (Art. 17)
- Customer entitlement to contract with independent aggregator of their choice, without need for consent or prior agreement of their supplier (Art. 13)
- Strict limits to compensation payments (Art 17(4))



Transposition of Electricity Directive 2019/944

- Key that Member States transpose these provisions into the national laws swiftly
- Deadline for transposition: 1 January 2020
- Transposition very uneven among Member States
- While progress has been made, significant number of important provisions have not been transposed in several Member States



Network Code on demand side flexibility

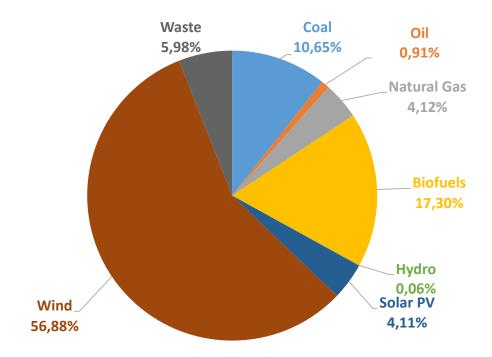
- Legal basis: Article 59(1)(e) Electricity Regulation Commission empowerment to establish a Network Code on demand side flexibility
- Commission together with ACER started work on provisions to address remaining regulatory barriers for the development of demand side flexibility, including demand response
- Provisions will either be included in a new network code/ guidelines or will consist of amendments to existing network codes/guidelines
- Provisions are <u>complementary</u> to the provisions of the Electricity Directive and Electricity Regulation



JRC findings on DR in Denmark

Iolanda SAVIUC and Chema LOPEZ for the Joint Research Center of the European Commission

Denmark's Electricity Generation mix in 2020 (%). Source: IEA



DR and Independent Aggregators in Denmark The Danish grid is well interconnected and the national goal is to upgrade it through projects coordinated with neighbouring countries. Denmark is currently focusing on the integration of power markets, with an emphasis on creating cross-border markets for balancing products.

Players and Context

- The Danish transmission system is owned and operated by Energinet. The distribution network is divided between 16 major DSOs and ca. 26 smaller DSOs.
- The Danish Energy Regulatory Authority (DERA) oversees the electricity, natural gas, and district heating markets.
- Denmark is part of Nord Pool, a deregulated electricity market. Nordic countries (Norway, Finland, Sweden, and Denmark) have separate TSOs, though they share a single electricity market.
- The Danish Utility Regulator (DUR) is the independent regulator in Denmark and together with Iceland, Sweden, Finland and Norway forms the NordREG group.

Transposition of EU Directive 2019/944 in Denmark

- Aggregators, including independent aggregators, can participate in the flexibility markets (bid limit: 1 MW)
- Market Model 3.0, based on the Danish Climate Act from 2020, recognizes that a high number of flexibility providers in the grid are necessary, and in order for this to be efficient, they need to be aggregated.
- The details of participation in DSO-markets are yet to be developed.
- As part of NordREG, in 2020 Denmark has contributed to developing the Nordic Regulatory Framework for Independent Aggregation, which proposes legislative changes in order to enable the legal basis for a common Nordic market for aggregation services

Prosumers and Flexibility Services

- Most customers now have different dynamic price contracts available to them, and many DSOs have implemented time-of-use tariffs.
- Adoption of dynamic pricing is still low: around 10% of Danish end-consumers using it, mainly due to the low impact of
 the energy component in the final electricity bill.
- The Energy Agreement from 2018 investigated how a new tariff system could be structured, among other things to facilitate demand response and a more flexible energy system with efficient use of the existing infrastructure

Flexibility Services

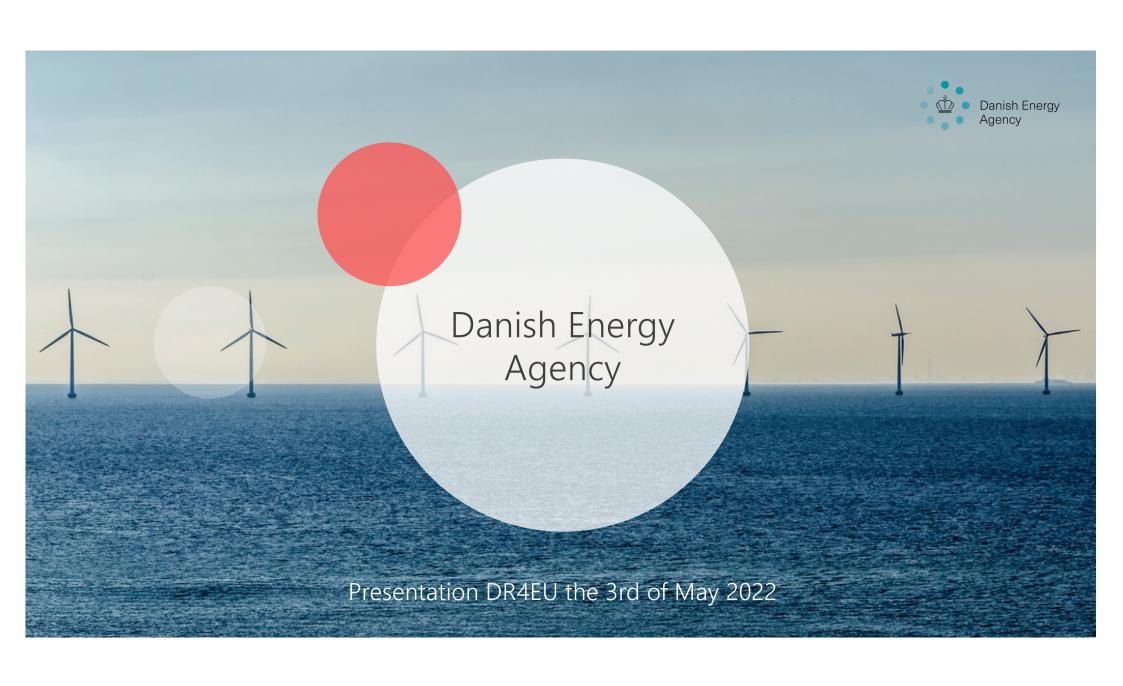
- The framework for participating in flexibility markets has improved, the requirements for online measurement and BRP to provide FCR have been lowered, and bids have been lowered from 10 MW in the past to 5 MW and 1 MW.
- Most of the tender conditions for suppliers of ancillary services are the same in the two bidding zones (western Denmark DK1, eastern Denmark DK2).

Explicit Flexibility services:

- The Nordic TSOs are currently developing a new Nordic Balancing Model towards a common Nordic capacity market for aFRRs and mFRRs, and the implementation of 15-minute imbalance settlement period.
- The FCR is open to DR and (independent) aggregation, across Denmark. The aFRR is open to DSF and aggregation too, however the minimum bid size of 5MW and the product design make it difficult for new market players to enter the market. The mFRR is open to DSF and (independent) aggregation

Enablers and Barriers for DR and Independent Aggregators

- From the regulatory point of view there are no specific barriers that prevent an independent service provider from signing a contract with a customer or aggregator to provide demand flexibility.
- An upgrade of the market model is ongoing, to facilitate demand management such as aggregation, and to support the
 use of flexibility at the distribution level.
- The market design currently favours generation, and the residential consumers are subjected to very high taxes. In addition to this, there are no reserve requirements in the Danish system.



Legal implementation

EMD rules on aggregation have been implemented by 31-dec 2020 in Executive order on aggregation no. 2250 of 29/12/2020

> BEK nr 2250 af 29/12/2020 https://www.retsinformation.dk/eli/lta/2020/2250





Lovtidende A

2020

Udgivet den 30. december 2020

29. december 2020

 $Bekendtgørelse\ om\ elhandelsvirksomheders,\ aggregatorvirksomheders\ og$ kollektive elforsyningsvirksomheders opgaver og forpligtelser i forbindelse med aggregering af aktive kunders elektricitetsforbrug og -produktion¹⁾

I medfør af § 6 a, stk. 1-3, § 9 og § 28, stk. 3, i lov om elforsyning, jf. lovbekendtgorelse nr. 119 af 6. februar 2020, som ændret ved lov nr. 2196 af 29. december 2020, fastsættes efter bemyndigelse i henhold til § 4, stk. 1, i bekendtgørelse nr. 1068 af 25. oktober 2019 om Energistyrelsens opgaver og beføjelser:

Anvendelsesområde og definitioner

- § 1. Denne bekendtgørelse finder anvendelse på elhandelsvirksomheders, aggregatorvirksomheders og kollektive elforsyningsvirksomheders opgaver og forpligtelser i forbindelse med aggregering af regulerbart elektricitetsforbrug og
- Stk. 2. §§ 3-8 finder ikke anvendelse i forhold til forbrugere, i det omfang anden lovgivning måtte give forbrugeren
- § 2. I denne bekendtgørelse forstås ved:
- 1) Indhentningseffekt: En ændring i forbrugs- eller produktionsmønstret i forbindelse med en aktivering af regulerbart elforbrug eller regulerbar elproduktion, som ikke finder sted under, men enten op til eller efter selve
- Lille virksomhed: En virksomhed, som beskæftiger færre end 50 personer og har en årlig omsætning og/ eller en samlet årlig balance på højst 10 mio. EUR.
- Markedsdeltager: En markedsdeltager som defineret i artikel 2, nr. 25), i Europa-Parlamentets og Rådets forordning (EU) 2019/943 af 5. juni 2019 om det indre marked for elektricitet.
- 4) Regulerbart elforbrug: En aktiv kundes aftag af elektricitet, der er sat op til at blive styret af en aggregatorvirksomhed via en funktion, der direkte påvirker driften på en eller flere installationer, eksempelvis ved at afbryde forbruget, ved at reducere forbruget eller ved at
- 5) Regulerbar elproduktion: En aktiv kundes levering af elektricitet, der er sat op til at blive styret af en aggre-

- gatorvirksomhed via en funktion, der direkte påvirker driften på en eller flere installationer, eksempelvis ved at afbryde produktionen, ved at reducere produktionen eller ved at øge produktionen.
- Skifterelateret gebyr: Et gebyr for skift af aggregatorvirksomhed, herunder kontraktopsigelsesgebyrer, som aggregatorvirksomheder direkte eller indirekte pålæg-
- Uafhængig aggregatorvirksomhed: En aggregatorvirksomhed som ikke er tilknyttet den aktive kundes elhan-

Aftaler om aggregering af elektricitet

- § 3. Aggregatorvirksomheder er forpligtet til at informere g 5. Aggregator viasorinite et forpriget a a constant et elforbrugerne fuldt ud om de muligheder og vilkår, der er forbundet med den kontrakt, som de tilbyder dem.
- Stk. 2. Aggregatorvirksomheder skal offentliggøre de kriterier, der lægges til grund for, om en aktiv kunde kan indgå en aftale om aggregering med aggregatorvirksomheden.
- § 4. Aggregatorvirksomheden skal oplyse, hvis indgåelse af en aftale om aggregering kræver samtidig indgåelse af en aftale om levering af elektricitet med en bestemt elhandels-
- Stk. 2. I tilfælde af at indgåelse af en aftale om aggregering kræver samtidig indgåelse af en aftale om levering af elektricitet, skal aggregatorvirksomheden forud for aftaleindgåelsen oplyse om elhandelsvirksomhedens navn og adresse og om krav vedrørende elektricitetsproduktet.
- Stk. 3. Hvis elektricitetsproduktet er omfattet af elhandelsvirksomhedernes pligt til indberetning efter elforsyningsloven § 72 a, stk. 5 og §§ 2-3 i bekendtgørelse nr. 1279 af 25. oktober 2016 om elhandelsvirksomhedernes indberetning af standardpriser, tariffer, rabatter og vilkår på prisportalen elpris.dk, skal oplysning efter stk. 2 omfatte en henvisning til elektricitetsproduktet på elpris.dk.
- Stk. 4. I tilfælde af at indgåelse af en aftale om aggregering kræver samtidig indgåelse af en aftale om levering af

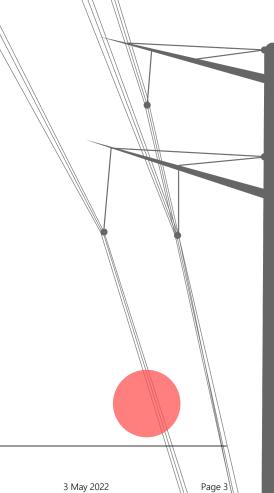
Bekendtgørelsen indeholder bestemmelser, der gennemfører dele af Europa-Parlamentets og Rådets direktiv 2019/944/EU af 5. juni 2019 om fælles regler for det indre marked for elektricitet og om andring af direktiv 2012/27/EU, EU-Tidende 2019, nr. L 158, side 125.

Klima-, Energi- og Forsyningsmir Energistyrelsen, j.nr. 2019-90526

3 May 2022

Guiding principles

- Ensure required independence
- Avoid market distortion
- Limit complexity





Independent aggregator

- Energinet and DSOs shall allow aggregators to participate in all electricity markets
- Participation shall not require other market participants consent
- Operation independent of supply contract possible, subject to Energinets regulations regarding aggregators



3 May 2022

Page 4

Avoid market distortion

- Independent aggregators can become financially responsible for their imbalances
 - Energinet to set rules on balance settlement and correction
- Parties affected by activation of flexibility shall be financially compensated
 - Energinet to set detailed rules on financial compensation
 - Financial compensation shall not results in market access barriers for aggregators
- The minister may set a deadline for Energinet's issuing of rules and regulations regarding balance correction and compensation



3 May 2022

Page 5

Limit complexity

- Aggregators shall inform about
 - Preconditions to be fulfilled by customers to enter into contract
 - Bundling with supply contract
- Bundled contracts shall clearly distinguish aggregation and supply services
- Household customers should not become directly involved in financial compensation measures



3 May 2022

Page 6







ENERGINET - THE DANISH TSO

DR4EU workshop - 3rd May 2022

Karsten Feddersen - <u>KAF@energinet.dk</u> Jeannette Møller Jørgensen - <u>JMJ@energinet.dk</u>



INDEPENDENT AGGREGATOR

- A company that is not associated with the consumers electricity supplier

Energinet have held two workshops with market participation

- June 2021 Data & methods
- September 2021 Compensation og Korrektion

Energinet regulation for independent aggregators is mandated in Aggregeringsbekendtgørelsen.

Regulation of independent aggregators only apply to <u>independent aggregators who deliver ancillary services</u> <u>containing energy</u>.

Compensation and correction settlement ensures that the independent aggregator is settled correct <u>without</u> impacting the balance responsible settlement of imbalances.



ANCILLARY SERVICE WILL CONSIST OF TWO PARTS

Need to regulate independent aggregators when they deliver energy containing ancillary services mFRR & aFRR to Energinet

Base requirement for the electricity system: All energy must be balanced

New market development -> Normally energy containing ancillary services is delivered as a combined flexibility and energy product. But for independent aggregators it will be possible to deliver energy containing ancillary services with being balance responsible for the energy part. Ie. Independent aggregators will only supply the flexibility part.

The possibility of avoiding balance responsibility for energy containing ancillary services requires obligations for the independent aggregators in order to retain the principles of *polluter pays* (financially responsible for imbalances)

Ancillary Service (mFRR & aFRR)

Flexibility

BSP – Balancing Service Provider

Energy

BRP – Balance Responsible Party



COLLETION OF DATA FOR THE INDEPENDANT AGGREGATOR

Data must be supplied by the independant aggregator to the Danish DataHub Markedsprocesses in the DataHub must be added/adjustet



Market metering point

Metering point in DataHub of type consumption (E17) or generation (E18) that always has a balance responsible and a retailer attached





Flexible asset – activated energy

Mandatory – Metering point for each asset of the aggregator with the activated energy that assembles the ancillary services.

			Tim e 20		
0	0	11	11	0	0



Flexible asset actual consumption or generation

Optional – Metering point for each asset with the actual consumption or generation of the asset.

			Tim e 20		
5	11	0	0	11	11

FNFRGINFT

EXAMPLE OF EVENTS AND SETTLMENT PROCES OF COMPENSATION AND CORRECTION SETTLEMENT

Event cause physical imbalance in the electricity system

Producer **ShadowSun** causes a 30 MW drop

Energinet buys 30 MW upregulation of mFRR

Independent aggregator SaveTheBalance activates 30 MW by turning of EVs

Data is collected

SaveTheBalance sends data to the DataHub for all activations

DataHub sums the activations for SaveTheBalance per balance responsible party per electricity supplier

Relevant data is send to eSett

eSett does imbalance settlement

The energy part of mFRR is settled with the balance responsible party at the spot price (kompensation)

The imbalances for the balance responsible party is corrected the the activatios from SaveTheBalances (correction)

The flexiblity part of the mFRR is settled with **SaveTheBalance** as the difference between the mFRR-price and the spot price

The balance responsible party of **ShadowSuns** buys the imbalance at the mFRR price and pays a imbalance fee to Energinet.

Polluter pays principle:

ShadowSun is financially responsible for the imbalances caused. EU regulation article 5

The compensation and correction model ensures correct settlement among the balance responble parties and SaveTheBalance

ENERGINET

EX OF NUMBERS OF COMPENSATION AND CORRECTION

Prices				Instructions										
mFRR price	€ 110,00	(qU)		Only change val	ues in the green	cells!	1							
Spot price	€ 100,00	,		If the mFFR price			tem activates u	p regulation. If	f the price is bel	ow down regula	tion is activatet			
Imbalance price	€ 110,00			Standard the mFFR price is the same as the spot price. Then there is no activation.										
Compensation price				Standard the gre	•		•							
Imbalance fee	€ 5,00			otaniaana tine gi e		The street of the	- Januar us							
baiance rec	3,00													
			Trade MWH	Trade value	Readings	BSP delivery	Readings with	BRP own	BRP	Actual vs	Imbalance	Compensatio	Actual BRP	Total
			(Spot)		without BSP	(Corrections)		Imbalance	Imbalance	trade	Energy Value		imbalance	settlement
			(-)					MWh	Fee cost	Imbalance			settlement	(Income for
										MWh	BRP)	energy	for energy	BRP)
BRP A	Buy (consumption)	Combination of UP = less cons + more	100	€ 10.000,00	100	-2,5	97,5	5	0 € -	-2,	5 € 1.100,00	-€ 100,00	€ 1.000,00	€ 1.000,00
	Sell (Production)	prod / DOWN = more cons + less prod	100	€ 10.000,00	100	7,5	107,5	5		7,	5			
	,					10				1	0 BRP has excee	ding energy		
							=				=	J J,		
BRP B	Buy (consumption)	EVs that are charged or stopped	100	€ 10.000,00	100	-10	90		0 € -	-1	0 € 1.100,00	-€ 100.00	€ 1.000.00	€ 1.000,00
	Sell (Production)	charging.	0	€ -	C)		_	0			
	,					10				1	0 BRP has excee	dina enerav		
							-							
BRP C	Buy (consumption)	PV feed to grid and BSP-operated	0	€ -					0 € -		0 € 1.100,00	-€ 100.00	€ 1.000.00	€ 1.000,00
5 0	Sell (Production)	battery	200	-	200		210			_	0	200,00	2 2.000,00	2.000,00
	(**************************************					10					0 BRP has excee	dina enerav		
							-							
BRP D	Buy (consumption)	"The bad guy" - the BRP who is causing	100	€ 10.000,00	115	C	115	5 3	30 € 150,00) 1	5 -€ 3.300,00	€ -	-€ 3,300,00	-€ 3.450,00
J 5	Sell (Production)	the request for mFRR	100		85				130,00	-1			3.333,03	350,00
	Jen (Fraudensin)	the request for minut	100	20.000,00		C					0 BRP lacks enei	av		
							<u>-</u> 1				= 2711 rachs crie	97		
BRP E	Buy (consumption)	"The good guy" - The BRP who by	100	€ 10.000,00	100	O	100	1	0 € -		0 € -	€ -	€ -	€ -
DIVI E	Sell (Production)	coincidents balances the system		€ -	100				0 0	_	0	<u> </u>		-
	Self (Froduction)	complacing balances the system				C		,			0 -			
				Trade value			_							BSP Income
BSP X	mFRR Up	Need more energy in the system	30											€ 300,00
DJF A	IIII AN UP	Need more energy in the system	30	3.300,00										200,00
BSP Y	mFRR Down	Need less energy in the system	60	F										€ -
DJF I	IIII VV DOWII	iveed less ellergy in the system	60	-										-

European workshops on demand response - Denmark

Helle Juhler-Verdoner, Managing director of Danish Intelligent Energy Alliance **26 April 2022**



Agenda

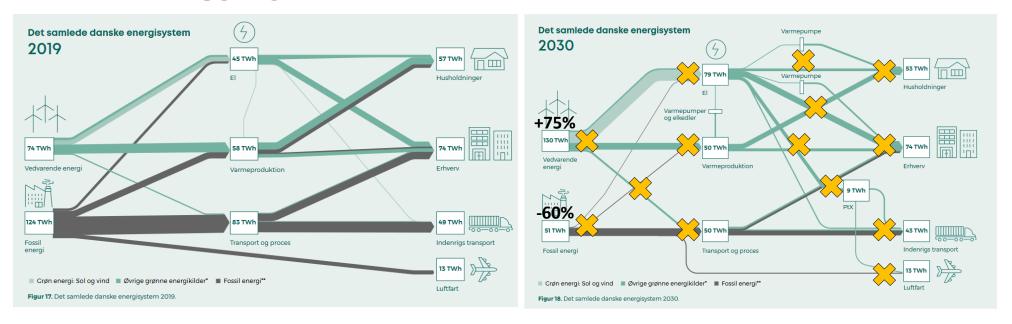
- The Danish Intelligent Energy Alliance Who are we?
- DR and security of supply?
- Fair competition and data
- Network tariffs and DR incentive
- Needs and benefits of DR



"With higher variability in supplies, power systems will need to make flexibility the cornerstone of future electricity markets in order to keep the lights on." Fatih Birol, IEA WEO 2018

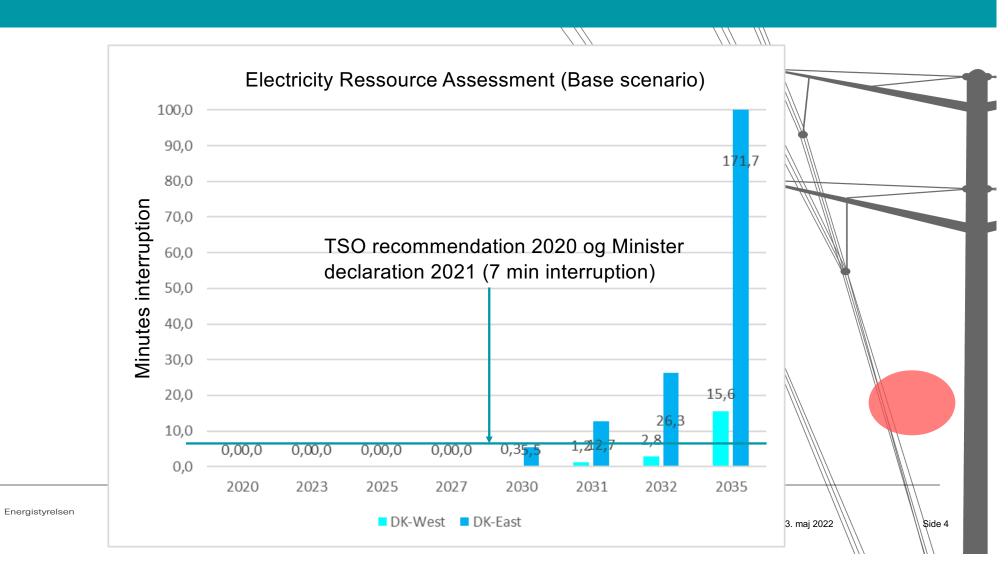


The energy system transition – Denmark



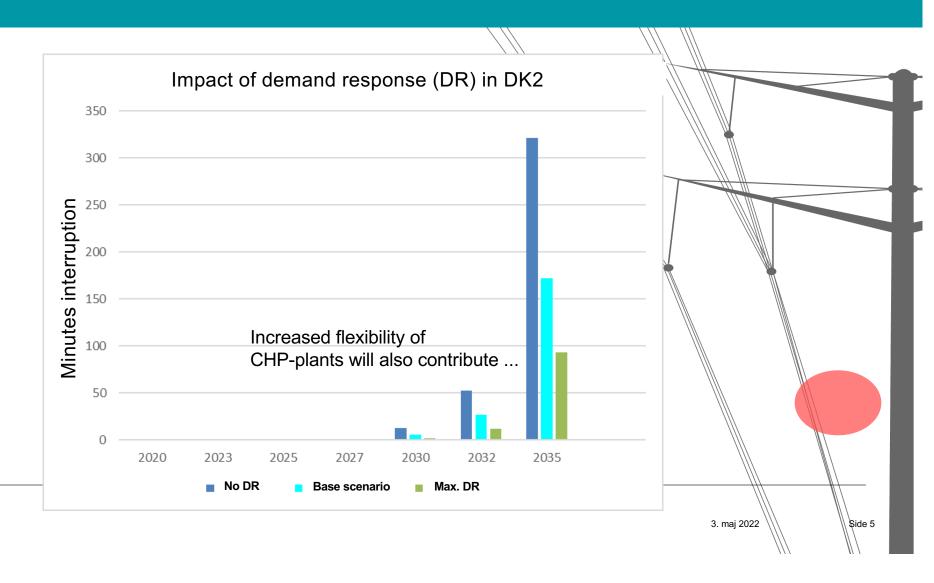
- 70%-reduction of CO₂-emissions by 2030 and 100% climate neutrality by 2050 aligned with a robust energy system in balance. Significant transition of the Danish energy system.
- Efficient sector coupling, digital asset management, demand response and focus on intelligent, digital customer solutions is key to reach the target by 2030 and beyond
- Deep digitalization optimize market places and drive development of new digital markets and inter-actions btw utilities and customers in all intersections of the energy and utility system

Electricity Adequacy Assessment



Demand Response – important part of the solution

Energistyrelsen



Agenda

- The Danish Intelligent Energy Alliance Who are we?
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"With higher variability in supplies, power systems will need to make flexibility the cornerstone of future electricity markets in order to keep the lights on." Fatih Birol, IEA WEO 2018



Fair competition and data

- You can only be a green leader if you are a digital leader
- The position is to ensure free access for all market players to anonymous utility data (power, heat, gas and water) – await government strategy on digitalization
- Electricy regulation ensures 3rd. Party access through consumer approval
- New electricity law will give access to DSO-data of various kind for all players



Dialogoplæg: Etablering af et Data Space for energi og forsyning







Agenda

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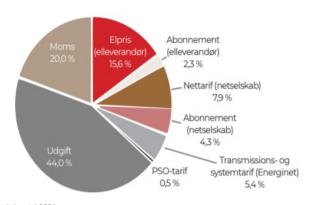
"With higher variability in supplies, power systems will need to make flexibility the cornerstone of future electricity markets in order to keep the lights on." Fatih Birol, IEA WEO 2018



Incentivising DR through grid tarifs

- Enhanced time-of-use tarifs (DSO-tarif model 3.0)
- P2X-agreement out lines geografical differentiation of grid tarifs
- Energinet review of all tariff elements (grid and system)
- New TSO-DSO-tarif model to be developed

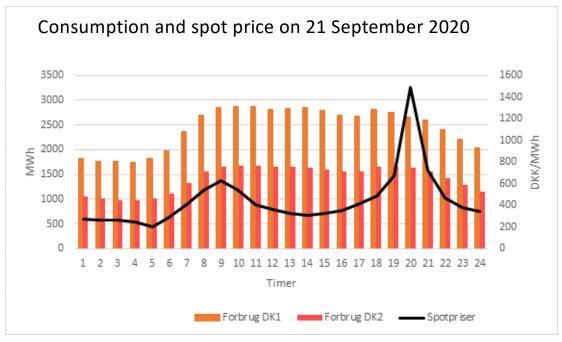
Fordeling af de samlede udgifter for en gennemsnitlig C flex-kunde med et forbrug på 4.000 kWh:



Kilde: Forsyningstilsynets elprisstatistik, 1. kvartal 2021.



Intelligent monitoring increase value of energy and grid optimization – energy savings + spotprice + grid tarif optimisation



Test on tariff diff. shows that 13% of an individual heat pump's consumption today is during winter peak

•	starif		
	kWh		
Total forbrug	6.710	Andel af total	
Heraf sommer	1.850	28%	
Heraf vinter	4.860	72%	
		Andel af total	Andel af sæson
Sommer højlast	1.850	28%	100%
Vinter højlast	4.239	:	1 87%
Vinter spidslast	621	9%	13%
I 3-ledet setup som fremtidsscenarie 1			
I 3-ledet setup som fremtidsscenarie 1	kWh		
I 3-ledet setup som fremtidsscenarie 1 Total forbrug	kWh 6.710	Andel af total	Andel af sæson
·		Andel af total 28%	Andel af sæson
Total forbrug	6.710		Andel af sæson
Total forbrug Heraf sommer	6.710 1.850	28%	Andel af sæson 44%
Total forbrug Heraf sommer Heraf vinter	6.710 1.850 4.860	28% 72%	
Total forbrug Heraf sommer Heraf vinter Sommer lav-last	6.710 1.850 4.860 815	28% 72% 12%	44%
Total forbrug Heraf sommer Heraf vinter Sommer lav-last Sommer høj-last	6.710 1.850 4.860 815 1.035	28% 72% 12% 15%	44% 56%



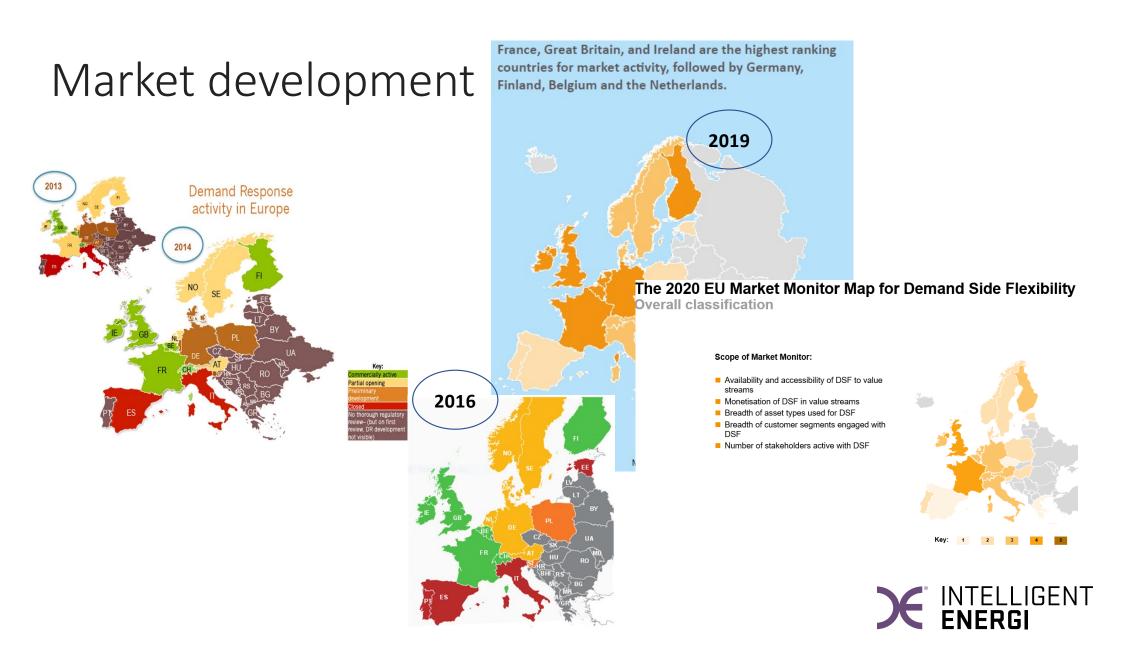
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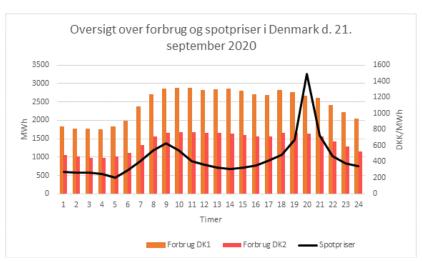


"With higher variability in supplies, power systems will need to make flexibility the cornerstone of future electricity markets in order to keep the lights on." Fatih Birol, IEA WEO 2018





Price signal from the ancillary service market and the grid operators are important instruments in the cost effective green transition



Case kølekompressorer DK2

DK2 regu	lering			Kapacitetsb	etaling mFFR DK2
1 Mwh	Frys	Opregulering	Pris højere eller lig med	2.500 kr.	
	_		Sum OP		SUM
		Sum OP	DK2		mFRR_UpP
År	mdr	DK2 kr.	timer		riceDKK
2021	l Feb	- kr.	0		40.320,00 kr.
2021	L Mar	- kr.	0		87.189,66 kr.
2021	L Apr	- kr.	0		249.155,37 kr.
2021	L Maj	- kr.	0		285.303,48 kr.
2021	L Jun	5.305,84 kr.	3		117.073,05 kr.
2021	L Jul	3.988,28 kr.	2		44.640,00 kr.
2021	L Aug		0		46.160,00 kr.
2021	L Sep	1.150,35 kr.	1		43.200,00 kr.
2021	L Okt	25.704,89 kr.	19		100.510,68 kr.
2021	L Nov	40.361,04 kr.	34		43.240,00 kr.
2021	L Dec	32.668,48 kr.	62		43.816,00 kr.
2022	2 Jan	18.222,03 kr.	14		35.940,00 kr.

Tarifmodel 3.0. Forbrugs fordeling	Andel - elbiler	Andel - varmepumper
Lavlast	25%	23%
Højlast – sommer	28%	17%
Højlast – vinter	29%	44%
Spidslast – sommer	8%	4%
Spidslast - vinter	10%	12%

Case eksempel – Tarifmodel 3.0.	Forbrug – kWh	Betaling ved flad tarif	Betaling ved tarifmodel 3.0	Besparelse
Nuvve – elbiler	102.701	22.573	20.678	
OK – lille varmepumpe	6.710	1.849	1.846	
Scenarier for elbilernes fleksibilitet				
50% af forbruget flyttes fra spidslast til højlast		22.573	17.597	-15%
100% af forbruget flyttes fra spidslast til højlast		22.573	14.516	-30%
100% af forbruget flyttes fra spidslast til lavlast		22.573	12.843	-38%

For more information contact:

Helle Juhler-Verdoner, Branchechef +45 35 300 456



Morten Lund Kristensen, Konsulent +45 35 300 423



Niels Hansen, Chefkonsulent +45 35 300 455





Danish Intelligent Energy Alliance

Established on 13 March 2012 by Danish Energy

Technology-Investors suppliers INTELLIGENT Consultancies ı 🔒 ı **Municipalities** Energy and **Institutions &** utilities (electricity, gas heating, wastewater)

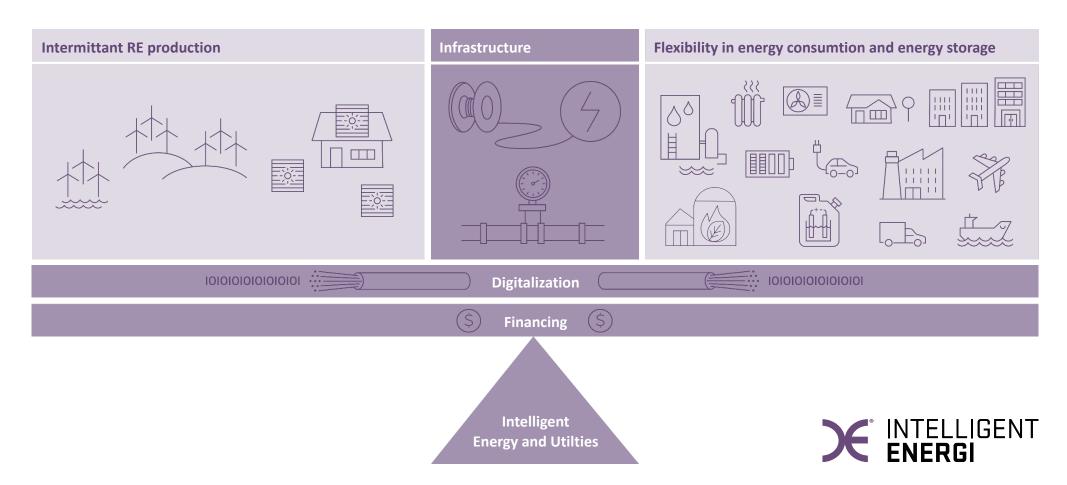
WHY?

The energy system is undergoing a significant transformation due to political

Decarbonization
Firstly through Electrification Digitalization The key enabler Decentralisation of RE production

> This calls for closer cooperation between infrastructure owners and related stakeholders to develop an INTEGRATED and **FLEXIBLE** energy system with sector coupling to buildings, transport and industry.

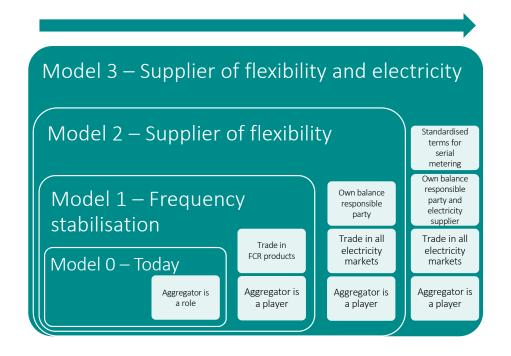
iEnergi strategy is to pave the way for an intelligent, active collaboration between all utilities, sectors and active customers. This will bring us all the way to climate neutrality by 2050 in a cost effective way through digitalized, flexible balancing between RE from wind and sun, energy consumption af energy storage





SUMMARY

- GRADUAL EXPANSION OF CO-EXISTING AGGREGATOR MARKET MODELS
- CLEAN ENERGY PACKAGE PUSHED DEVELOPMENT FURTHER ALONG



Model 1 Model 0 + 2 and 3

No balance The aggregator is or responsibility due to need to delegate low or no energy balance amount. responsibility

Consumers' point of view

And one question:

We do not see such companies delivering aggregation of DR services in the market, with benefits to all consumers. Would it be because the net benefit principle defined in the European legislation is hidden somewhere or simply absent in the Danish implementation?

Martin SALAMON

