PRILOGA - Vprašalnik

(NEODVISNI) AGREGATOR NA SLOVENSKIH TRGIH ELEKTRIČNE ENERGIJE – AKTUALNI VIDIKI

Splošne informacije

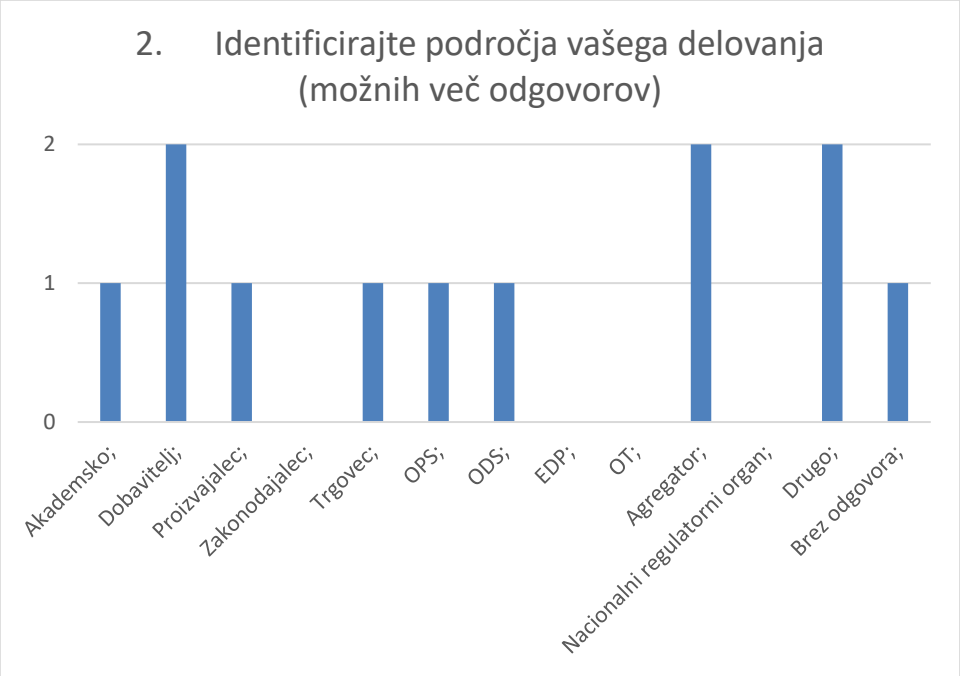
1. *Naziv organizacije oziroma ime in priimek (v primeru fizične osebe):*

1	INFFORMATIKA, d.d., Vetrinjska ulica 2, Maribor
2	Energija plus d.o.o., Vetrinjska 2, 2000 Maribor
3	SODO d. o. o.
4	ELES, d.o.o
5	Koalicija evropskih agregatorjev DR4EU (odziv prejet od cyberGRID GmbH & Co KG)
6	Petrol d.d., Ljubljana
7	NGEN d.o.o. , MOSTE 26b, 4274 ŽIROVNICA
8	Energetska zbornica Slovenije, Sekcija za vprašanja dobaviteljev električne energije (EZS)
9	Univerza v Mariboru, Fakulteta za elektrotehniko, računalništvo in informatiko

2. *Identificirajte področja vašega delovanja (možnih več odgovorov):*

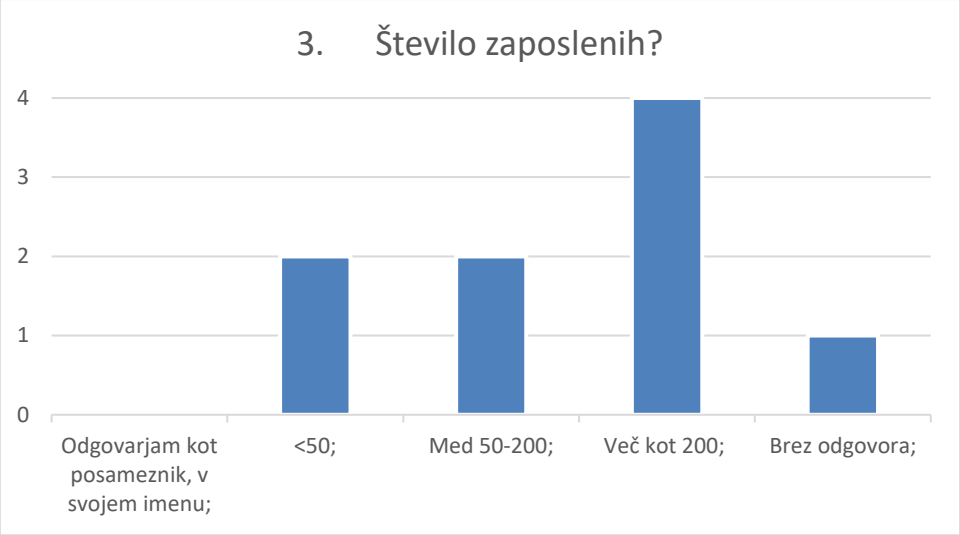
1	☒Drugo (prosimo specificirajte): Ambicija kot Informacijski upravljalec točke za izmenjavo podatkov
2	☒Dobavitelj;
3	☒ODS;
4	☒OPS;
5	/
6	☒Dobavitelj;

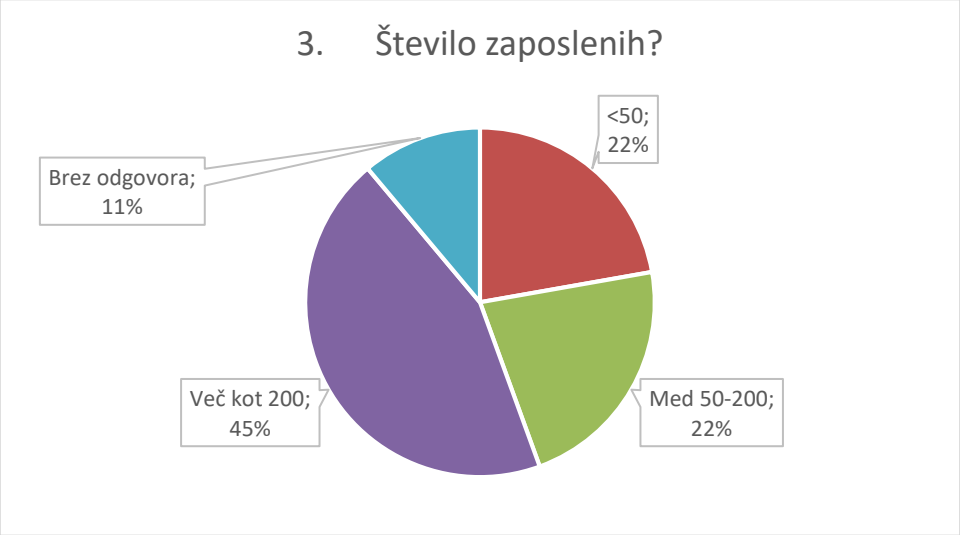
	☒Proizvajalec; ☒Trgovec; ☒Agregator;
7	☒Agregator;
8	☒Drugo (prosimo specificirajte): Sekcija za vprašanja dobaviteljev električne energije (SVDEE) združuje družbe, ki izvajajo elektroenergetsko dejavnost s področja dobave električne energije.
9	☒Akademsko; ☒Drugo (prosimo specificirajte): uporabnik omrežja – aktivni odjemalec



3. Število zaposlenih?

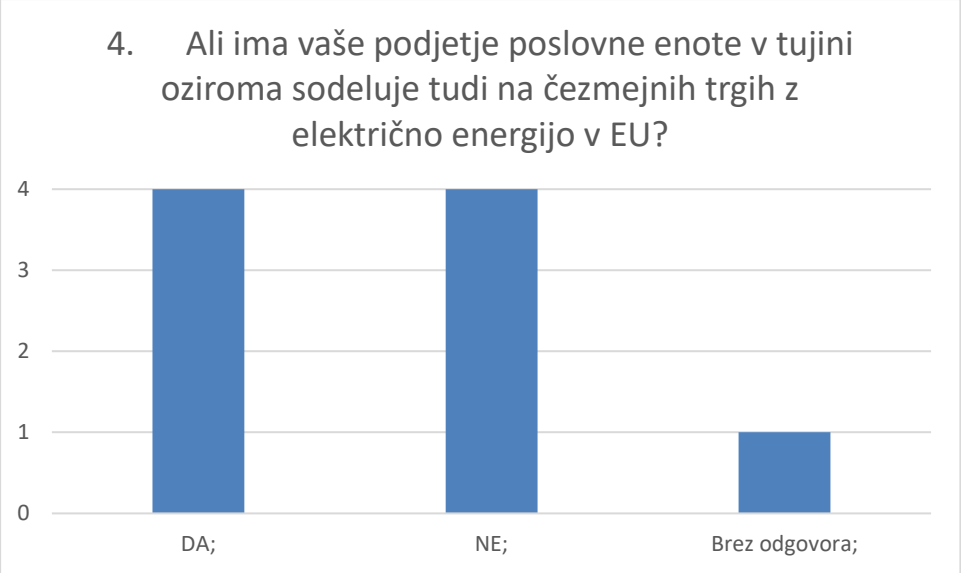
1	☒Med 50-200;
2	☒Med 50-200;
3	☒<50;
4	☒Več kot 200;
5	/
6	☒Več kot 200;
7	☒<50;
8	☒Več kot 200;
9	☒Več kot 200;

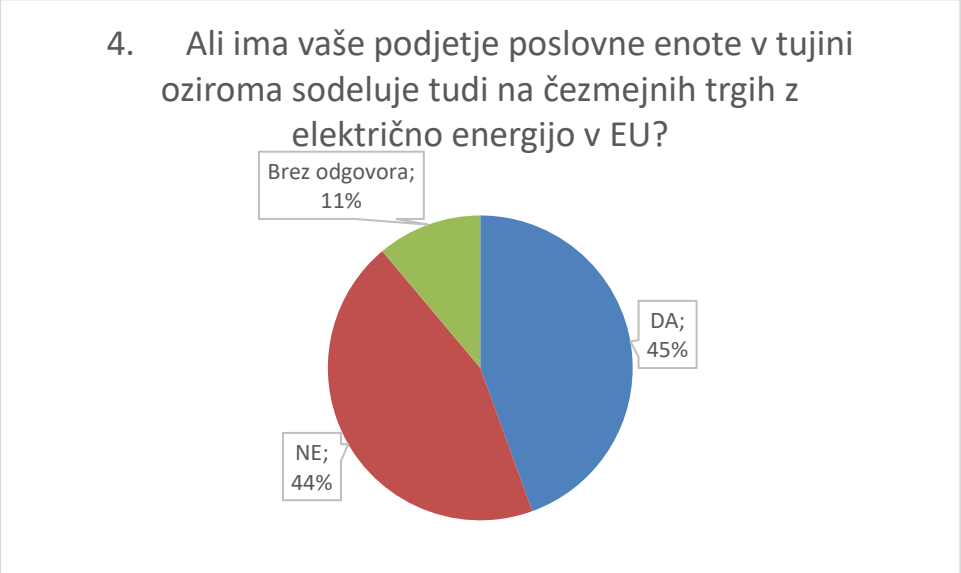




4. *Ali ima vaše podjetje poslovne enote v tujini oziroma sodeluje tudi na čezmejnih trgih z električno energijo v EU?*

1	☒NE;
2	☒NE;
3	☒NE;
4	☒DA; Komentar (izbirno): Sodelujemo v okviru sodelovanja med OPS.
5	/
6	☒DA;
7	☒DA; Komentar (izbirno): V odpiranju
8	☒DA;
9	☒NE;

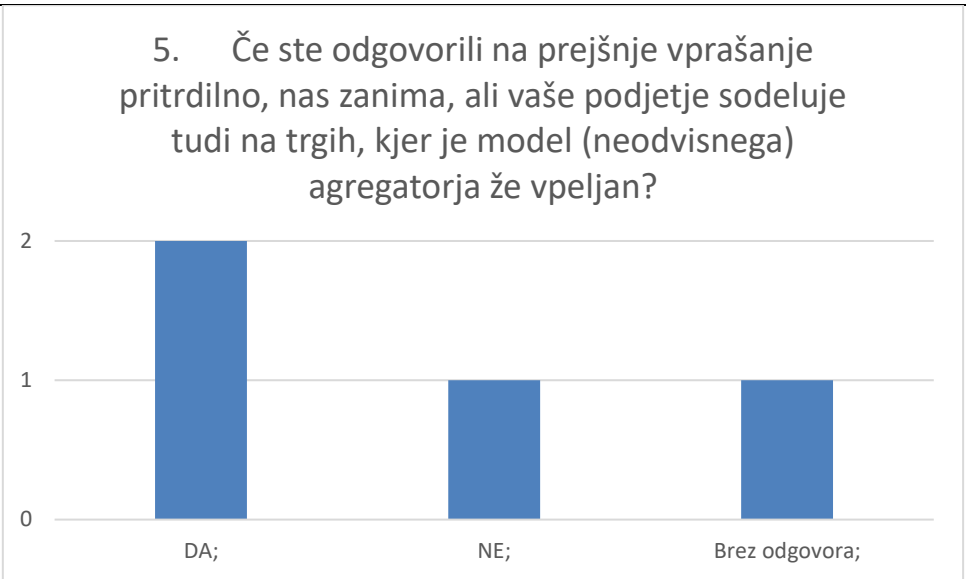


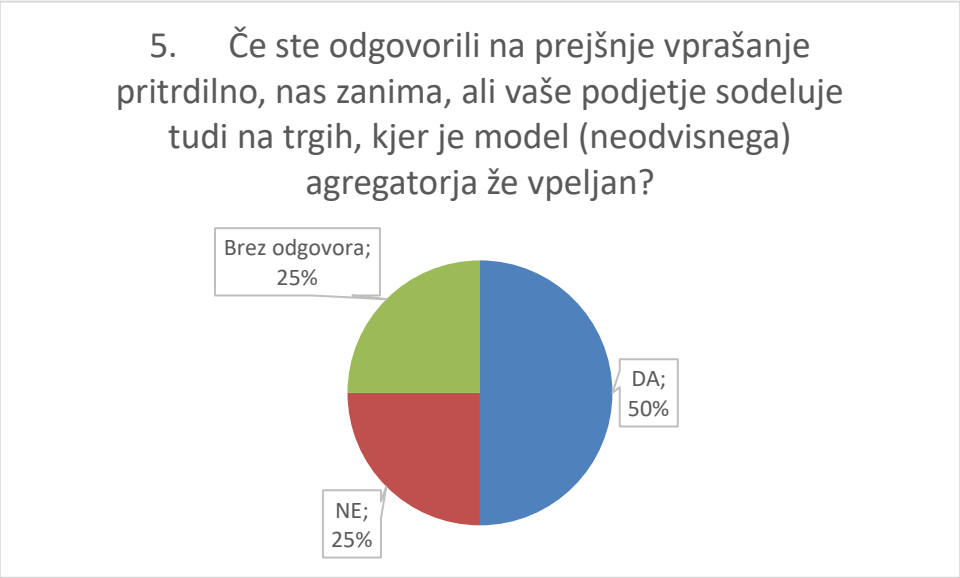


5. *Če ste odgovorili na prejšnje vprašanje pritrdilno, nas zanima, ali vaše podjetje sodeluje tudi na trgih, kjer je model (neodvisnega) agregatorja že vpeljan?*

1	/
2	☒NE;
3	/
4	☒DA; Komentar (izbirno): Sodelujemo v okviru sodelovanja med OPS.
5	/
6	☒NE;
7	☒DA; Komentar (izbirno): Zelo dobro sodelujemo s Švicarskim partnerjem – neodvisni agregator
8	/

9	☒NE;

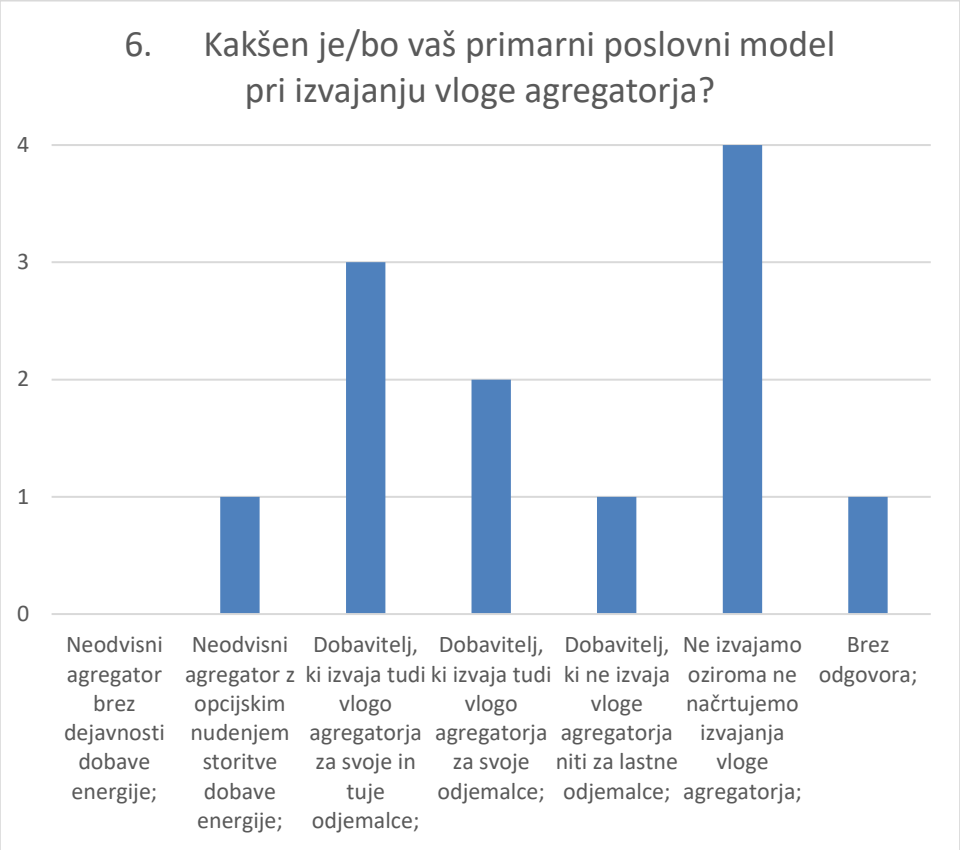




6. Kakšen je/bo vaš primarni poslovni model pri izvajanju vloge agregatorja?

1	☒Ne izvajamo oziroma ne načrtujemo izvajanja vloge agregatorja; Komentar (izbirno): Glede na naše dosedanje delo je naša ambicija informacijska podpora procesom izmenjave podatkov za potrebe izvajanja procesov agregiranja
2	☒Dobavitelj, ki izvaja tudi vlogo agregatorja za svoje in tuje odjemalce; ☒Dobavitelj, ki izvaja tudi vlogo agregatorja za svoje odjemalce;
3	☒Ne izvajamo oziroma ne načrtujemo izvajanja vloge agregatorja; Komentar (izbirno): ODS ima lahko vlogo naravnega agregatorja in bo to vlogo izvajal v primeru s predpisi naloženih mu nalog.
4	☒Ne izvajamo oziroma ne načrtujemo izvajanja vloge agregatorja;
5	/

6	☒Dobavitelj, ki izvaja tudi vlogo agregatorja za svoje in tuje odjemalce;
7	☒Neodvisni agregator z opcijskim nudenjem storitve dobave energije;
8	☒Dobavitelj, ki izvaja tudi vlogo agregatorja za svoje in tuje odjemalce; ☒Dobavitelj, ki izvaja tudi vlogo agregatorja za svoje odjemalce; ☒Dobavitelj, ki ne izvaja vloge agregatorja niti za lastne odjemalce; Komentar (izbirno): Sekcije za vprašanja dobaviteljev električne energije (SVDEE) združuje družbe, ki izvajajo elektroenergetsko dejavnost s področja dobave električne energije, pri čemer so nekateri člani sočasno aktivni kot agregatorji.
9	☒Ne izvajamo oziroma ne načrtujemo izvajanja vloge agregatorja;



7. *Če ste odgovorili, da boste aktivni (tudi) kot agregator, kje vidite temeljne poslovne priložnosti, poleg vloge ponudnika storitev izravnave (PSI)?*

1	/
2	Sistemske storitve, tržne priložnosti
3	/
4	/
5	/
6	• Izraba prožnosti na kratkoročnih trgih (intraday, day ahed) • Izraba prožnosti za zmanjševanje odstopanj proizvodnje iz OVE • Zmanjševanje odstopanj celotnega portfelja dobavitelja

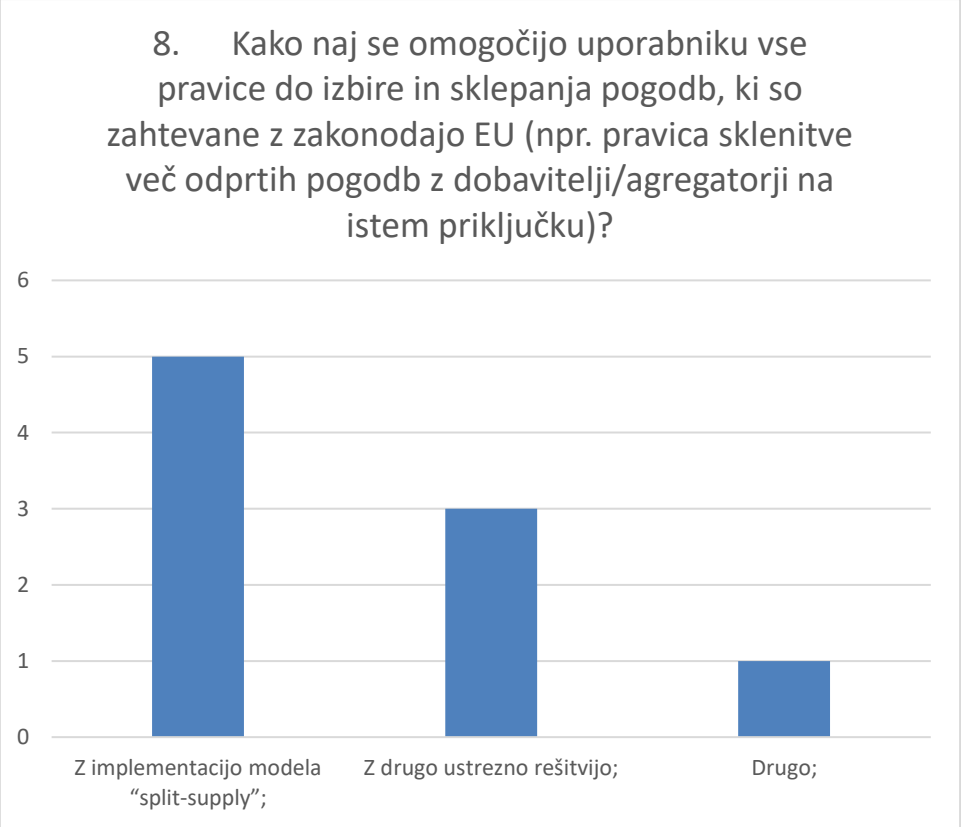
7	Nudenje storitve dinamične online dobave energije končnim uporabnikom (hišni hranilnik in smart enota s povezanimi porabniki in SE).
8	/
9	/

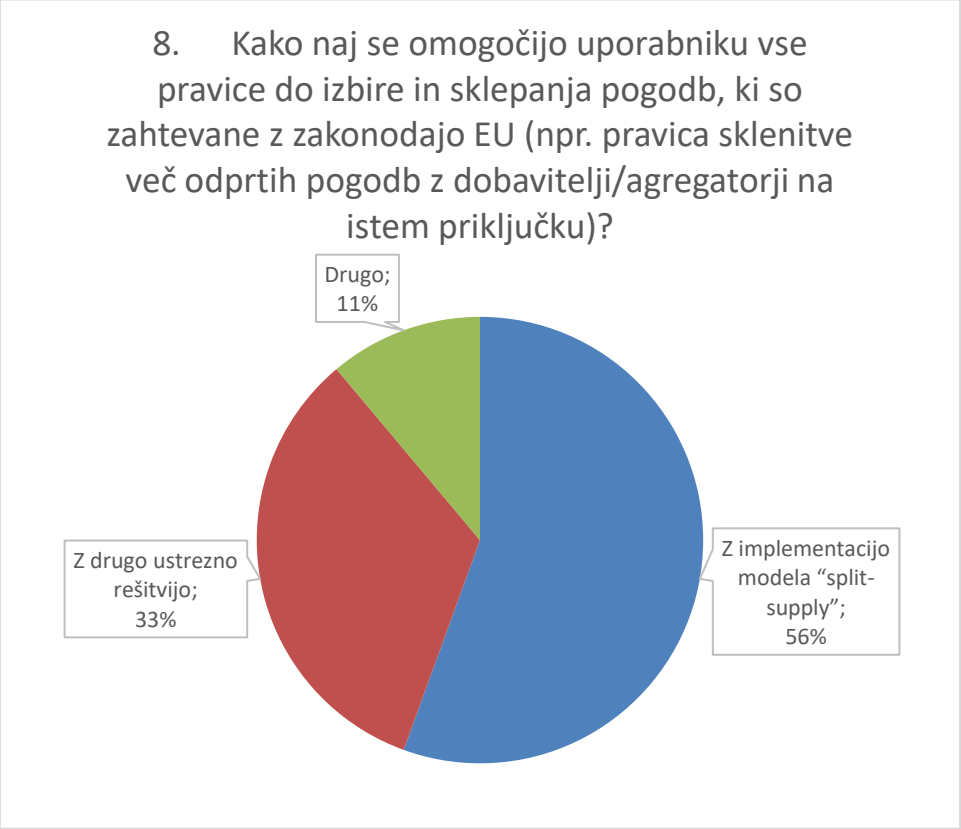
Model dobave

8. *Kako naj se omogočijo uporabniku vse pravice do izbire in sklepanja pogodb, ki so zahtevane z zakonodajo EU (npr. pravica sklenitve več odprtih pogodb z dobavitelji/agregatorji <u>na istem priključku</u>)?*

1	☒Z implementacijo modela "split-supply";
2	☒Z implementacijo modela "split-supply";
3	ODS bo moral podpreti informacijski sistem za namen trga prožnosti.
4	☒Z implementacijo modela "split-supply"; Komentar (izbirno): V Elesu se načeloma strinjamo s »split supply«. Želimo pa poudariti, da konkretna implementacija modela ni toliko pomembna za nas, dokler imamo možnost jasne določitve/izračuna storitve, ki nam jo PSI nudi, tj. imamo dostop do ustreznih meritev, ki so lahko tudi za MM pod nadzorom ODS.
5	The 'split-supply' is not a solution as per EU legislation. • It does not allow an independent aggregator to operate DR (i.e. an aggregator that does not supply electricity to the consumer). Therefore it does not comply with art17-3 (a) of the EMD. • it does not ensure that DR and supply contracts are independent. Therefore it does not comply either with art 13-1, whereby consumers should be able to conclude a DR contract "independently from their electricity supply contract". The appropriate solution derives from a clear balance responsibility for each kind of actor, as per recital 15 of the ER ✓ DR aggregator is responsible for matching his sales with the change he triggers in participating consumers' load, calculated as the difference between a baseline and the actual consumption. This 'allocated volume' is used to calculate his imbalance by comparing it to his 'final position in the market' (i.e. net sales). Thus his responsibility is clear. ✓ Supplier is responsible for the remainder, i.e. the actual consumption (corrected or not, cf infra the discussion on suppliers' models). The supplier should simply match this consumption volume with his purchases in the market. ➢ So they have very different responsibilities, clearly separate, even if involving same consumers. • This is not related to any 'split-supply' model, that would in fact bind DR and supply, and infringe the EMD.
6	☒Z implementacijo modela "split-supply";
7	☒Z implementacijo modela "split-supply";

	Komentar (izbirno): Uporabnik ima (je kupil – investiral - smart enoto in hišni hranilnik) možnost sodelovati, lahko dobi nagrado v obliki trenutne nizke cene električne energije, ki jo agregira agregator v smislu lastne izravave ali trenutne potrebe sistemskih storitev. Tako dobimo dodatni stimulans za končnega uporabnika.
8	Tovrstne zahteve neposredno ne izhajajo iz zakonodaje EU; Direktiva 2019/944 npr. v 4. členu zahteva, da »da imajo lahko vsi odjemalci hkrati sklenjeno več kot eno pogodbo o dobavi električne energije, pod pogojem, da so vzpostavljena zahtevana priključna in merilna mesta«, kar predpostavlja, da je lahko na enem priključnem oz. merilnem mestu aktiven le en dobavitelj. Prav tako Direktiva 2019/944 v 13(1) členu zahteva, »da lahko vsi odjemalci neodvisno od svoje pogodbe o dobavi električne energije in izbranega elektroenergetska podjetja prosto kupujejo in prodajajo elektroenergetske storitve, vključno z agregiranjem, razen dobave«. Skupaj to pomeni, da mora biti odjemalcev dovoljeno prosto sodelovanje pri agregiranju in drugih energetskih storitvah, ne pa nujno več kot eno pogodbo o dobavi (razen če imajo za to zahtevana priključna in merilna mesta). Te zahteve so izpolnjene ob implementaciji predloga modela Centralne Entitete (glej odgovor na vprašanje št. 11).
9	☒Z drugo ustrezno rešitvijo (prosimo, pojasnite predlog rešitve): Ločitev dobave in agregacije. Naj se omogoči menjave dobaviteljev v izbranem časovnem intervalu vsaj enega dne ali ene ure. Dobavitelje se menuje za avtomatiziranim sklepanjem pogodb z uporabo tehnologij veriženja blokov ali podobne tehnologije. Aktivni odjemalec agregatorju sam sproti posreduje razpoložljivo prožnost in izbrani časovni interval v katerem to prožnost ponuja. V primeru izbire za izvajanje storitev tudi tu pride do avtomatiziranega sklepanja pogodb za vsako izvedbo storitve prožnosti posebej. Pogodba vsebuje tudi podatke o plačilu in penalih v primeru neizvedbe v dogovorjenem obsegu. Na tak način se aktivno odjemalec profilira sam. Zunanje profiliranje ni potrebno ravno tako kot baseline, saj aktivni odjemalec sam in prostovoljno posreduje agregatorju svoje podatke o trenutnem potencialu prožnosti, ki ga lahko ponudi in storitev prožnosti tudi izvede.





9. *Ne glede na prejšnji odgovor, kakšno je vaše mnenje glede modela »split-supply«? Navedite prednosti, slabosti, pomisleke, predloge.*

1	Več vlog v eni osebi kar je lahko prednost in slabost, vedno je možna nadgradnja, zahteva dodatni števec, kar bo kasneje lahko problem itd.
2	Menimo, da se preko modela split-supply in uporabe Baseline izračuna da najbolj ugodno rešiti vprašanje modela agregacije (trenutni, korekcijski ali kompenzacijski)
3	/
4	Implementacija mora omogočati ustrezno preverjanje izvajanja storitev, ob upoštevanju preprostosti implementacije.
5	*(glej odziv na predhodno vprašanje)*
6	Deljena pripadnost merilnih mest ter vzpostavljanje virtualnih merilnih točk povečuje kompleksnost trga, kar končnemu uporabniku sicer poveča možnost izbire, vendar hkrati zmanjša preglednost in razumljivost za končne uporabnike. Ključno vlogo in hkrati največjo potencialno težavo pri omenjenem modelu tako vidimo v dostopnosti podatkov v realnem času za vse vpletene deležnike.
7	Prost odgovor: Prednosti : zmanjšajo se vstopne ovire na trg za NA , končni uporabnik ima lahko več DOB med katerimi je tudi NA.
8	Model 'split supply' na vseh segmentih je v praksi neizvedljiv, saj predpostavlja vzpostavitev dovolj priključnih in merilnih mest (kar je npr. za gospodinjske odjemalce vprašljivo z vidika stroškovne upravičenosti), prav tako ni potreben za implementacijo neodvisnega agregatorja.
9	Pomislek: za vsako napravo – polnilno postaji, toplotno črpalko, PV sitem, baterijski hranilnik imam posebej dobavitelja, ki je hkrati tudi agregator in želi krmiliti mojo napravo. To se mi zdi nesprejemljivo. Vse naprave, ki so za mojim števcem predstavljajo moj portfelj za izvajanje storitev prožnosti, ki ga želim tudi upravljati kot celoti in kot takega ponuditi tudi na trgu storitev prožnosti, oziroma agregatorju. Če vsako napravo krmili drug dobavitelj/agregator, to močno oteži optimizacijo izkoriščanja mojega portfelja, skorajda onemogoča prehod v vsaj omejeno otočno obratovanje v primeru motenj dobave, in močno ovira vzpostavitev lokalnih mikro omrežij. Storitve prožnosti je na lokalnem nivoju mogoče uporabiti kot orodje za vzpostavitev mikro omrežja za potrebe večanja samooskrbe, večanja deleža obnovljivih virov ali otočnega obratovanja. ''Split-supply'' z drobitvijo portfelja prožnosti mojih naprav vse našteto bistveno omejuje ali celo onemogoča.

Model neodvisnega agregatorja

10. *Za spodnje modele neodvisnega agregatorja (NA) prosimo navedite, kako vi vidite prednosti, slabosti ter postopek izvajanja v praksi:*

	MODEL	*PREDNOSTI*	*SLABOSTI*	*IZVAJANJE V PRAKSI*
1	*Obstoječi*	Že izvedljiv	Vstop malih agregatorjev?	

	Model brez posegov	Kot zgoraj		
	Korekcijski	Enostavnejša izvedba	Potrebne (sicer male) spremembe v zakonodaji	
	Kompenzacijski	Enostavnejša izvedba	Potrebne (sicer male) spremembe v zakonodaji	
2	*MODEL*	*PREDNOSTI*	*SLABOSTI*	*IZVAJANJE V PRAKSI*
	Obstoječi			Po našem vedenju se v praksi ne izvaja
	Model brez posegov		Ni vzdržen za agregatorja, ker povzroča odstopanja	
	Korekcijski		Ni vzdržen za dobavitelja, ker ne pokriva stoškov	
	Kompenzacijski	V primeru, da se ne uporabi split-supply z baseline izračunom za tržno porazdelitev energije in stroškov, je ta model izmed zgoraj naštetih najustreznejši.		
3	/			
4	/			
5	The CEP does not leave much space, if any, for MS to define their model regarding the balance responsibility of aggregators, as was described supra, due to article 17-3 (d) of the EMD combined with recital 15 of the ER. The CEP leaves more flexibility for MS to choose models for the balance responsibility of suppliers (cf EMD recital 39). ➢ MS may choose an 'uncorrected model', whereby, when DR occurs, the supplier of participating consumers will have a positive imbalance, so that he will be paid by the settlement entity (say the TSO). ➢ MS are also allowed to use a 'corrected model', whereby the 'perimeter' of the supplier is 'corrected', by adding the curtailed consumption (=DR volume) to the actual consumption of his customers. Then the supplier is deprived of his positive			

imbalance and related revenue, and he should be entitled to receive a compensation for this correction by the settlement entity (say the TSO).

- In both cases, MS may choose (as per art.17-4) to implement a compensation payment mechanism, so that market parties contribute to pay the TSO (who, in turn, pays the supplier or participating consumers). However, this should not create a barrier to DR. Therefore, the burden must be shared. As per the net benefit rule set forth in art.17-4, the solution is to share the burden among all suppliers because they all benefit from DR reducing their sourcing costs, so they should bear costs pro rata their market shares, so as to share net benefits. DR shall be charged only when and to the extent that costs would exceed benefits.

(se nadaljuje v odzivu na naslednje vprašanje)

6

MODEL	*PREDNOSTI*	*SLABOSTI*	*IZVAJANJE V PRAKSI*
Obstoječi		Kar nekaj segmentov še nedorečenih, predvsem relacija NA in DOB – vsak deležnik po svoje interpretira obstoječa pravila	Količinska izravnava med NA in DOB je prepuščena bilateralnemu dogovoru kar v praksi pomeni, da je lahko prisotnih veliko različnih rešitev na eni strani ter možnost, da dogovora med NA in DOB sploh ne pride na drugi strani
Model brez posegov			
Korekcijski	Avtomatska količinska izravnava (ni dodatnih odstopanj)	Ker ni upoštevan vidik absolutnih količin to v boljši položaj postavlja Agregatorja. Kot rešitev vidimo možnost korekcije na nivoju meritev (kot predlagano v posvetovalnem dokumentu) – pri čemer je ponovno ključno, da so te podatki deležnikom skoraj v realnem	

			času (da ne bi prišlo do težav pri izravnavi odstopanj v D-2)	
	Kompenzacijski	Avtomatska količinska izravnava (ni dodatnih odstopanj)	Ocenjujemo, da bo težko zagotoviti konsenz glede višine regulirane cene	
7	*MODEL*	*PREDNOSTI*	*SLABOSTI*	*IZVAJANJE V PRAKSI*
	Obstoječi	Že vpeljan model - deluje v praksi.	NA in DOB sta v enakem položaju, ko gre za prijavo zaprtih pogodb in v primeru razlik se obema korigirajo na 0, kar lahko DOB izkoristi in izboljša svojo pozicijo ter zmanjša lastna odstopanja bilančne skupine in s tem neupravičeno poveča odstopanja NA.	V praksi deluje, če DOB sprejema podatke NA in oba prijavljata enake količine v zaprtih pogodbah pri OT.
	Model brez posegov	Ni prednosti za NA	Odstopanja na škodo NA	
	Korekcijski	Korekcija tržnega plana se izvaja z vrha	Odstopanja med realizirano in aktivirano energijo padejo na NA. Odstopanja bi morala pasti na bilančno skupino kateri MM pripada oz. na merilno mesto, kjer je enota.	
	Kompenzacijski	Korekcija tržnega plana se izvaja z vrha	Regulirane cene	Najprej je potrebno definirati v katerih primerih naj bi

				prihajalo do kompenzacije
8	*MODEL*	*PREDNOSTI*	*SLABOSTI*	*IZVAJANJE V PRAKSI*
	Obstoječi	/	Vprašanje plačila energije, prenos energije, odstopanja	Ni urejeno področje in ne zagotavlja nevtralnega finančnega vpliva na dobavitelje
	Model brez posegov	/	Isto kot obstoječi model	Isto kot obstoječi model
	Korekcijski	Rešuje nekatera vprašanja trenutne ureditve, a ne v celoti	Nepravilnost obračuna ne-energetskih postavk in/ali vrednotenje energije	Rešuje nekatera vprašanja trenutne ureditve, a ne v celoti, tako da se naj ne implementira
	Kompenzacijski	Finančno nevtralen za dobavitelje, v kolikor je regulirana cena ustrezna	Določitev ustrezne regulirane cene je kompleksni postopek in v praksi verjetno nemogoč; Odpira vprašanje razkrivanja cen, kar ni sprejemljivo; Nepravilnost obračuna ne-energetskih postavk	Neizvedljivost določanja ustrezne regulirane cene, tako da se naj ne implementira
9	/			

11. Kateri model agregatorja je po vašem mnenju najustreznejši za Slovenijo? Prosimo, utemeljite.

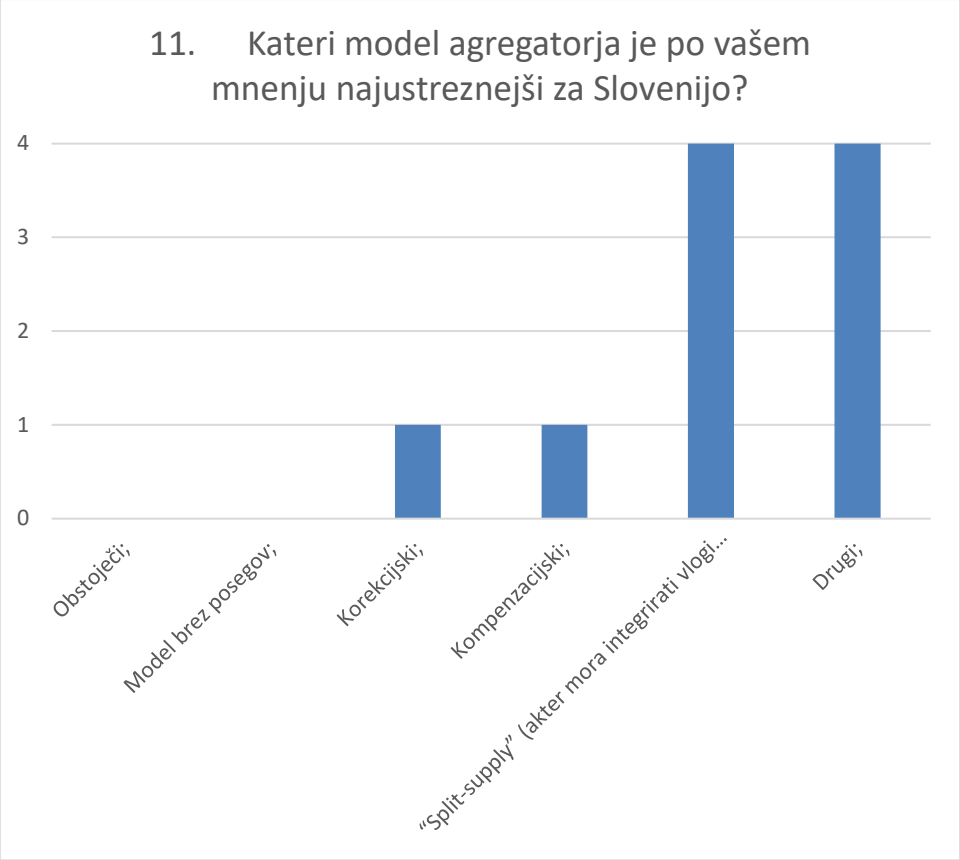
1	☒“Split-supply” (akter mora integrirati vlogi dobavitelja in agregatorja); Utemeljitev: Zagotavlja prožnost za nadgradnjo sistema tekom rasti
2	☒“Split-supply” (akter mora integrirati vlogi dobavitelja in agregatorja); Utemeljitev: Le na tak način nobeden izmed akterjev na trgu ni prikrajšan
3	/
4	☒Kompenzacijski; ☒“Split-supply” (akter mora integrirati vlogi dobavitelja in agregatorja); Utemeljitev: Načeloma sta oba modela sprejemljiva za Eles. Pri »split supply« vidimo težave pri razdelitvi/določitvi baseline med dobaviteljem in NA.

5	*(nadaljevanje odziva iz predhodnega vprašanja)* In practice • Slovenia could open all markets based on a model without correction nor compensation mechanism, because this is the simplest approach. • If and when DR volumes grow, then a corrected model could be implemented. However this is more complex, so that it is not necessary to start with. The correction should entitle the supplier to receive a compensation for this correction from the TSO, at spot price. • Besides, when DR volumes grow, the TSO may be allowed to charge a compensation to all suppliers, pro rata their market shares, so that the TSO can pay the impacted suppliers, be it: o In an uncorrected model: for their positive imbalance o In a corrected model: TSO pays suppliers a compensation for the correction. Such cost sharing mechanism ensures that costs are fairly shared among suppliers, who all benefit from reduced sourcing costs in the market, pro rata their market share. However, such compensation and cost sharing mechanism will not be necessary if DR develops among all consumers, so that DR volumes are evenly shared among suppliers, therefore suppliers would automatically share both benefits and costs in a fair way, so that DR will ultimately ensure net benefits to all consumers. If DR is not evenly spread among suppliers, then the cost sharing mechanism should be implemented. Besides, this mechanism ensures all suppliers who want to become aggregators can operate DR from their customers on a level playing field with independent aggregators. • Finally, as DR volumes grow, benefits of DR (as defined by art.17-4) should be regularly assessed and published. If ever benefits would not exceed price of DR, then DR may also be charged to offset the difference, so that, in any case, DR will always provide net benefits to all suppliers, and all consumers.
6	☒Korekcijski; Utemeljitev: Kot navedeno v točki 10 smatramo, da bi korekcijski model ob upoštevanju alternative pri korekciji (korekcija na nivoju meritev) najbolj uravnoteženo obravnaval vse ključne deležnike (NA, DOB ter pravice končnega odjemalca). Pomembno je, da se iz procesnega vidika pri dobavitelju ne spremeni nič (obračun, napovedovanje ipd.).
7	☒“Split-supply” (akter mora integrirati vlogi dobavitelja in agregatorja); ☐Drugi – navedite: Obstoječi model s »Split supply« Utemeljitev: Slovenija ima težavo z dist. mrežo v smislu 4x manjša povprečna moč mreže na terenu kot se dejansko zaračunava. Kočnega uporabnika je potrebno stimulirati, da postane aktiven uporabnik in je po lastni volji prispeval (investiral) v enoto, ki omogoča

	sprejemanje energije, regulacijo energije za MM in omogočanje prilagajanja v realnem času, s tem razbremenimo tudi potrebo po nadgradnji omrežja.

8	☒Drugi – navedite:
	Kot ustrezen model za Slovenijo predlagamo t.i. 'Model Centralne Entitete' (glej utemeljitev).
	Utemeljitev:
	Obstoječi model in model brez posegov sta povsem neprimerna; model »split-supply« ni ne primeren kot tudi ne relevanten, saj ni potreben za reševanje vprašanja neodvisnega agregatorja in tudi ni zahtevan s strani CEPa (in v praksi neizvedljiv).
	Kompenzacijski in korekcijski model imata določene prednosti, a nobeden izmed njiju ne reši vprašanja pravilnega obračuna relevantnih ne-energetskih postavk (npr. omrežnina, trošarina); dodatno k temu kompenzacijski model temelji na regulirani ceni, določitev katere je vprašljiva z vidika pravičnosti in primernosti (ter izvedbene praktičnosti).
	Ker nobeden izmed predlaganih modelov ni v celoti primeren (bodisi konceptualno ali praktično), kot ustrezen model za Slovenijo predlagamo t.i. 'Model Centralne Entitete', ki združuje prednosti raznih modelov in jih nadgradi z rešitvijo za pravilnost in pravičnost obračuna.
	V modelu Centralne Entitete se vzpostavi nova vloga na trgu, in sicer vloga Centralne Entitete, ki zagotovi nadgradnjo merilnih podatkov in ustrezno alokacijo (glede na aktivacije) agregatorju in dobavitelju ter tako zagotovi pravilnost in pravičnost obračuna tako energije kot vseh relevantnih postavk.
	Model Centralne Entitete tako izpolnjuje ključni pogoj za uspešno implementacijo neodvisnega agregatorja – zagotavljanje finančne nevtralnosti za dobavitelje.
	Model CENTRALNE ENTITETE se lahko implementira na več načinov:
	
	• IMPLEMENTACIJSKI MODEL 1
	  • Implementacija preko nadgradnje obračunskih podatkov → prenos energije preko Centralne Entitete
	  • Dobavitelj dobi energijo plačano, kot napovedano in dobavljeno v odsotnosti aktivacije → finančno nevtralni vpliv
	  • Ker ni vsa dobavljena energija tudi porabljena, mora dobavitelj ločeno zaračunati energijo in omrežnino/trošarino/prispevke
	  • *ALTERNATIVA:*
	  • *dobavitelj izvede obračun, kot da se aktivacija ni zgodila (ne prilagodi billing-a)*
	  • *poračun razlike izvede Centralna Entiteta (zahteva spremembe omrežninskih in trošarinskih predpisov in zakonodaje)*
	• IMPLEMENTACIJSKI MODEL 2
	  • Implementacija preko virtualnega merilnega mesta prožnosti (VMMP) → prenos energije preko odprte pogodbe na VMMP

	• Centralna Entiteta izvede alokacijo relevantnih podatkov in količin dobavitelju in agregatorju, in vsak izvede svoj obračun vseh relevantnih postavk preko svoje odprte pogodbe • Dobavitelj dobi energijo plačano, kot napovedano in dobavljeno v odsotnosti aktivacije → finančno nevtralni vpliv • Ker ni vsa dobavljena energija tudi porabljena, mora dobavitelj ločeno zaračunati energijo in omrežnino/trošarino/prispevke Glede na predvideno vlogo CE je najbolj primerno, da to vlogo prevzame Borzen, saj že razpolaga s podatki o tržnimi plani, obratovalnimi napovedmi, ter v ta namen vodi 'register trga', in tudi prejema merilne podatke od SODO/OPS/ODS (iz baze merilnih podatkov) za namen bilančnega obračuna.
9	☒Drugi – navedite: Omogočiti menjavo dobaviteljev vsaj na en dan ali celo na uro. Dobavitelji ne dobijo nobene kompenzacije za izvajanje storitev prožnosti. Za storitve prožnosti skrbijo neodvisni agregatorji in dobaviteljem na zagotavljajo nobene kompenzacije. Utemeljitev: Če naj trg storitev prožnosti energije res zaživi, je treba zmanjšati moč dobaviteljev na odjemalci, kar je mogoče doseči z omogočeno dnevno ali urno menjavo dobaviteljev, ki se bodo v takem primeru s pomočjo (lastnih) agregatorjev bistveno bolj borili za odjemalce in dodo težko zahtevali še nadomestilo zaradi sprememb v profilu odjema ali proizvodnje, ki bi jih povzročilo izvajanje storitev prožnosti. Storitve prožnosti bodo težko zaživele brez sprememb na trgu energije. Radi bi uvedli trg prožnosti brez korenitih sprememb na obstoječem trgu energije. To bo verjetno težko izvedljivi.



Učinek »odboja«

12. Kakšno je vaše mnenje glede učinka odboja (MM kompenzira aktivacijo v drugem časovnem obdobju)? Če menite, da je pomemben, kako bi ga sistemsko uredili?

1	/
2	Menimo, da ne smemo podcenjevati učinka odboja. Lahko, da bo učinek odboja povzročil še večje nestabilnosti v sistemu, ki smo jih z agregacijo hoteli znižati. Da se bodo odboji pri nekaterih vrstah kupcev dogajali je neizbežno. Podatki pilotnih projektov na to temo nam niso dostopni.
3	/
4	Menimo, da je odboj vedno prisoten, ko uporabljamo prilagajanje odjema (ne uporabljamo proizvodnih virov za znižanje/povečanje odjema), saj imajo odjemalci industrijski proces vezan na to. Vključitev odboja v kompenzacijski model.
5	Depending on the kind of DR and how it is operated, load may be reduced or only (partially) shifted to a later period. However, the impact on suppliers is really small, because during this rebound, the shifted load will be paid by consumers, and suppliers will learn how to forecast this when volumes grow, so that there is basically no impact on imbalances then that would not be foreseen as consumption usually is. Accordingly, it should be emphasized that rebound cannot be included in the calculation of the compensation mechanism set forth in art.17-4, which relates only to costs incurred by suppliers during the activation of demand response.

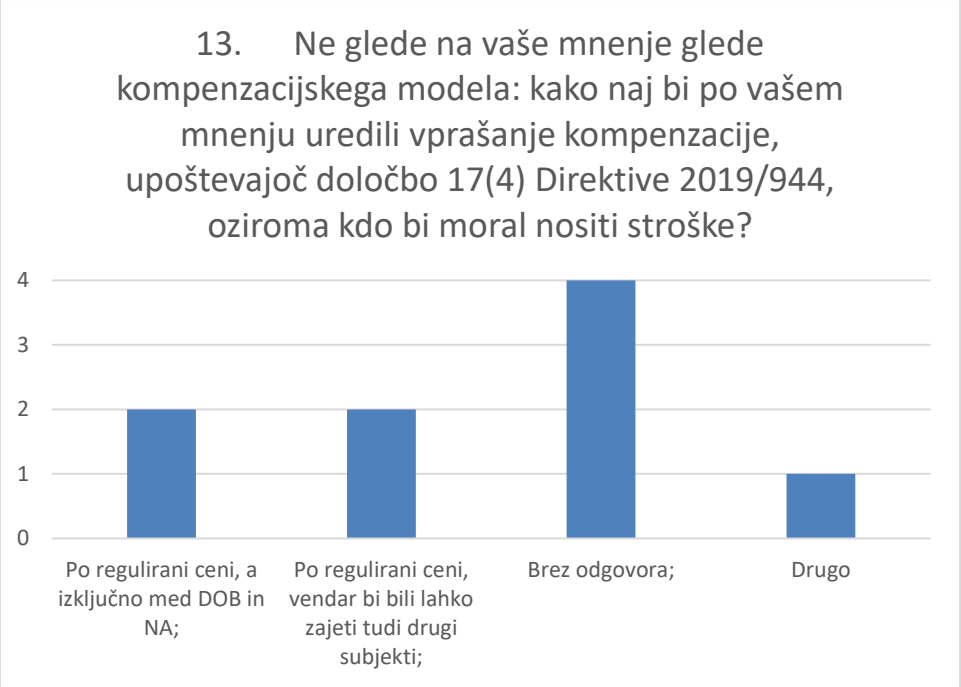
6	Smatramo, da učinek odboja v praksi ne bo izrazit in v tem trenutku ni potrebne sistemske ureditve te tematike (se ga lahko zanemari)
7	S prehodom na 15-minutni obračunski interval ali celo na 5-minutni bi se v celoti izognili učinku odboja, ker ne bi bilo več možno kompenzirati aktivacije v drugem časovnem obdobju.
8	Na segmentih, kjer so naši člani, ki so aktivni v agregiranju, trenutno aktivni (B2B), t.i. rebound effect ne opažamo, prav tako se v raznih razvojnih projektih ne opazi rebound effecta (v kolikor je, je manjši kot statistična napaka napovedovanja). Najbolj smiselno je, da se implementira najbolj ustrezen model implementacije neodvisnega agregatorja – model Centralne Entitete (glej odgovor na vprašanje št. 11) – in se nabira izkušenj in dejanskih podatkov, ter se potem, po smiselno dovolj dolgem obdobju za pridobivanje ustreznih podatkov, eventualno odpre vprašanje rebound effect na podlagi ex-post podatkov, v kolikor se izkaže, da je rebound effect 1) prisoten in 2) nezanemarljiv.
9	Pri uvedbi v prejšnji točki opisanih sprememb tudi odboj ni več problem. Jasno pa nam mora biti, da so odjemalci priključeni na omrežja, da iz njega dobijo energijo ali pa jo v omrežje oddajo. Storitev prožnosti pomenijo samo to, da so odjemalci v zameno za nadomestilo pripravljeni premikati svojo porabo znotraj nekega časovnega intervala. Če v tem časovnem intervalu ne morejo dobit ali oddati vse energije, omrežja ne potrebujejo. To pomeni, da aktivacije v okviru storitev prožnosti v delu časovnega intervala zmanjšajo porabo (proizvodnjo), v drugem delu časovnega intervala pa jo povečajo. Glede na to vsako izvajanje storitev prožnosti na nek način povzroča tudi odboj.

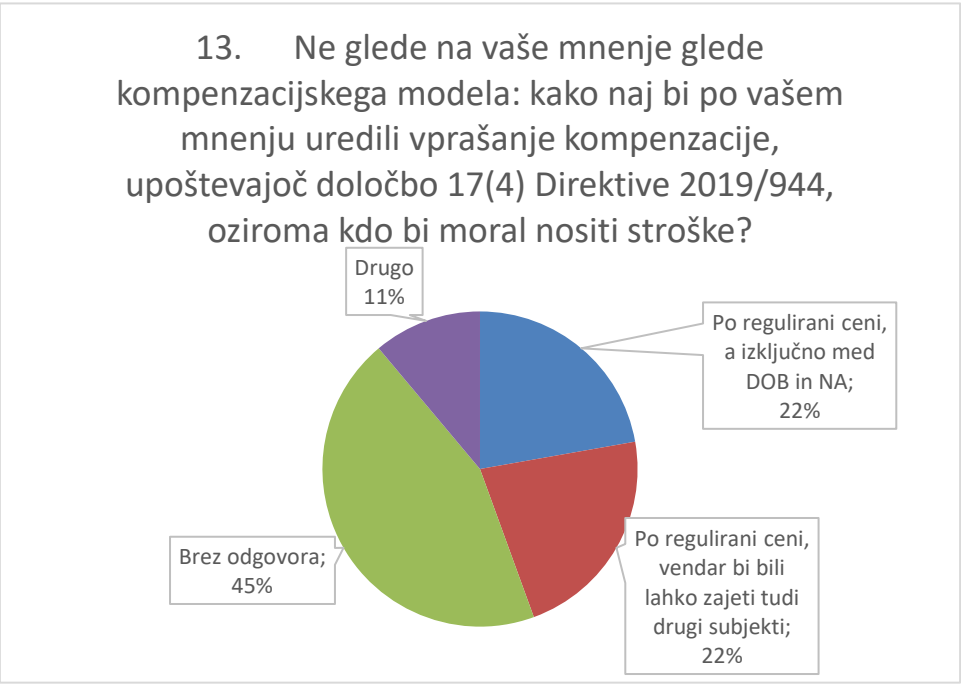
Kompenzacija

13. *Ne glede na vaše mnenje glede kompenzacijskega modela: kako naj bi po vašem mnenju uredili vprašanje kompenzacije, upoštevajoč določbo 17(4) Direktive 2019/944, oziroma kdo bi moral nositi stroške?*

1	☒Po regulirani ceni, a izključno med DOB in NA; Komentar (izbirno): Regulirana cena opredeljena v pravilih delovanja trga
2	☒Po regulirani ceni, vendar bi bili lahko zajeti tudi drugi subjekti – pojasnite: V osnovi obstaja nezaupanje med DOB in NA okrog izvedene regulacije količin. Prav tako ni nujno da imata DOB in NA sklenjeno kakršnokoli pogodbo (EFET). Iz tega zornega kota bi bilo smiselno, da je v transakcijo vključen še nekdo, ki lahko preveri upravičenost količin in ki zagotovi izvedbo plačil. Komentar (izbirno): Ne glede na zgoraj zapisano menimo pa bi bil model split-supply in base line z uporabo tudi za agregacijo najprimernejši model.
3	/
4	☒Po regulirani ceni, a izključno med DOB in NA; Komentar (izbirno):

	Kompenzacijske cene prepustimo trgu, kar implicira, da se lahko implicira model brez eksplicitnih kompenzacij (DOB – NA, preko obračuna odstopanj), temveč je to predmet dogovora med DOB in odjemalcem, tj. vključena je v ceno energije, ki je določena na podlagi ocene tveganj iz naslova zmožnosti napovedovanja profila odjemalčevega odjema.
5	The key principle to implement any compensation mechanism is to decide in two steps: - Who should receive what - Who should pay According to art.17-4, MS may ensure a compensation is paid by various market parties to the suppliers impacted by DR. However, this should not create a barrier to DR nor aggregators, so that the cost should be shared, not charged to DR. The calculation methodology set forth under the net benefit rule ensures that DR is charged only if and to the extent it would benefit suppliers less than it would cost them. The costs that can be taken into account and compensated are limited in the article to direct costs incurred during the activation of DR. *(se nadaljuje v odzivu na naslednje vprašanje)*
6	/
7	☒Po regulirani ceni, vendar bi bili lahko zajeti tudi drugi subjekti – pojasnite: / Komentar (izbirno): V tem primeru bi bilo verjetno bolj ekonomsko, da NA prevzame tudi vlogo DOB na MM in se izognemo vsem tem modelom in variantam, ki so omenjene v tem dokumentu.
8	Komentar (izbirno): Kompenzacija zajema kritje stroškov, ki jih je imel dobavitelj zaradi aktivacije. V predlogu modela Centralne Entitete (glej odgovor št. 11) do teh stroškov sploh ne pride, saj je ključni princip modela Centralne Entitete zagotavljanje finančno nevtralnega vpliva aktivacije na dobavitelje. V luči vprašanja o kompenzacijah je to dodatni razlog za implementacijo modela Centralne Entitete, saj se s tem učinkovito reši vprašanje kompenzacije in posledično ne zahteva zelo kompleksnega določevanja kompenzacijske cene (saj škode, ki bi jo bilo potrebno kompenzirati, sploh ni).
9	Komentar (izbirno): Možnost zamenjave dobavitelja na dan ali na uro, pa kompenzacija za izvajanje storitev prožnosti ne bo potrebna. Naj se dobavitelji skupaj z agregatorji potrudijo in ponudijo odjemalcem boljše ponudbe. Za odjemalce se bo treba potruditi.





14. Ali imate predlog, kako bi določili model take kompenzacijske cene?

1	/
2	Menimo, da je najbolj primerna cena tista, ki je bila izoblikovana na tržni način, je javno objavljena in je najbliže času v prihodnosti trenutku agregacije.
3	/
4	Model kompenzacije naj bo vezan na cene, ki veljajo na trgu na katerem je bila fleksibilnost ponujena.
5	*(nadaljevanje odziva iz predhodnega vprašanja)* Rather than a regulated price, the spot price could be used, i.e. the price in the day ahead wholesale market for this period, or some kind of average, provided the

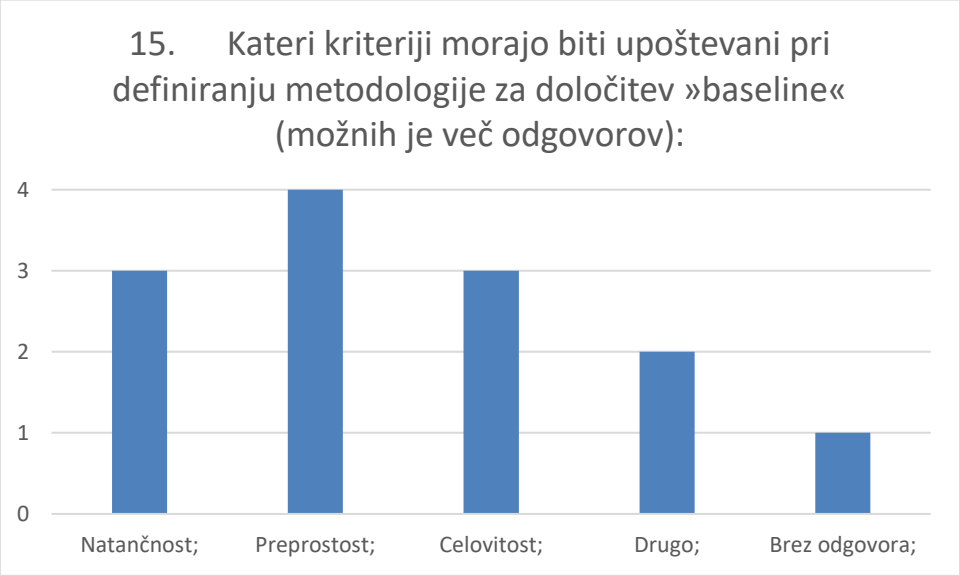
	formula to calculate this average would be justified and published. This average could reflect the cost of DR for suppliers, which is the cost of buying DR volumes which are not generated electricity, hence not consumed nor billed to consumers.
6	/
7	/
8	Tovrstna določitev je preveč kompleksna, kar je eden izmed razlogov za neprimernost kompenzacijskega modela. V predlogu modela Centralne Entitete (glej odgovor št. 11) do teh stroškov sploh ne pride, saj je ključni princip modela Centralne Entitete zagotavljanje finančno nevtralnega vpliva aktivacije na dobavitelje.
9	Glede na podan predlog kompenzacije niso potrebe.

Metodologija »baseline«

15. *Kateri kriteriji morajo biti upoštevani pri definiranju metodologije za določitev »baseline« (možnih je več odgovorov):*

1	☒Preprostost ;
2	☒Natančnost ; ☒Preprostost ; ☒Celovitost ;
3	/
4	☒Celovitost;
5	https://library.cee1.org/sites/default/files/library/10774/CEE_EvalDRBaseline_2011.pdf The key criteria to select any baseline methodology is to make it reliable and predictable during operations, so that the DR aggregator can ensure in real time he meets his commitments and delivers the exact volume. For instance, an aggregator should be allowed to use data from his own meters or submeters, if he wishes to, in order to deliver DR volumes with maximum accuracy and reliability. Conversely, imposing to use data from TSO&DSO meters that would not be available in real time may result in poor accuracy.
6	☒Celovitost ;
7	☒Natančnost ; ☒Preprostost ;
8	☒Natančnost ; ☒Preprostost ; ☒Celovitost ;
9	☒Drugo – prosimo opredelite in utemeljite: Raje kot ponovljive in natančne metode za določitev baselinea bi imel raje točne metode. Glede na opise v točki 8 in 9, ko aktivni odjemalec agregatorju sam sproti posreduje podatke o tem kaj lahko v naslednjem časovnem intervalu ponudi na področju prožnosti, določitev baselinea ni potrebna, ravno tako kot je nepotrebno

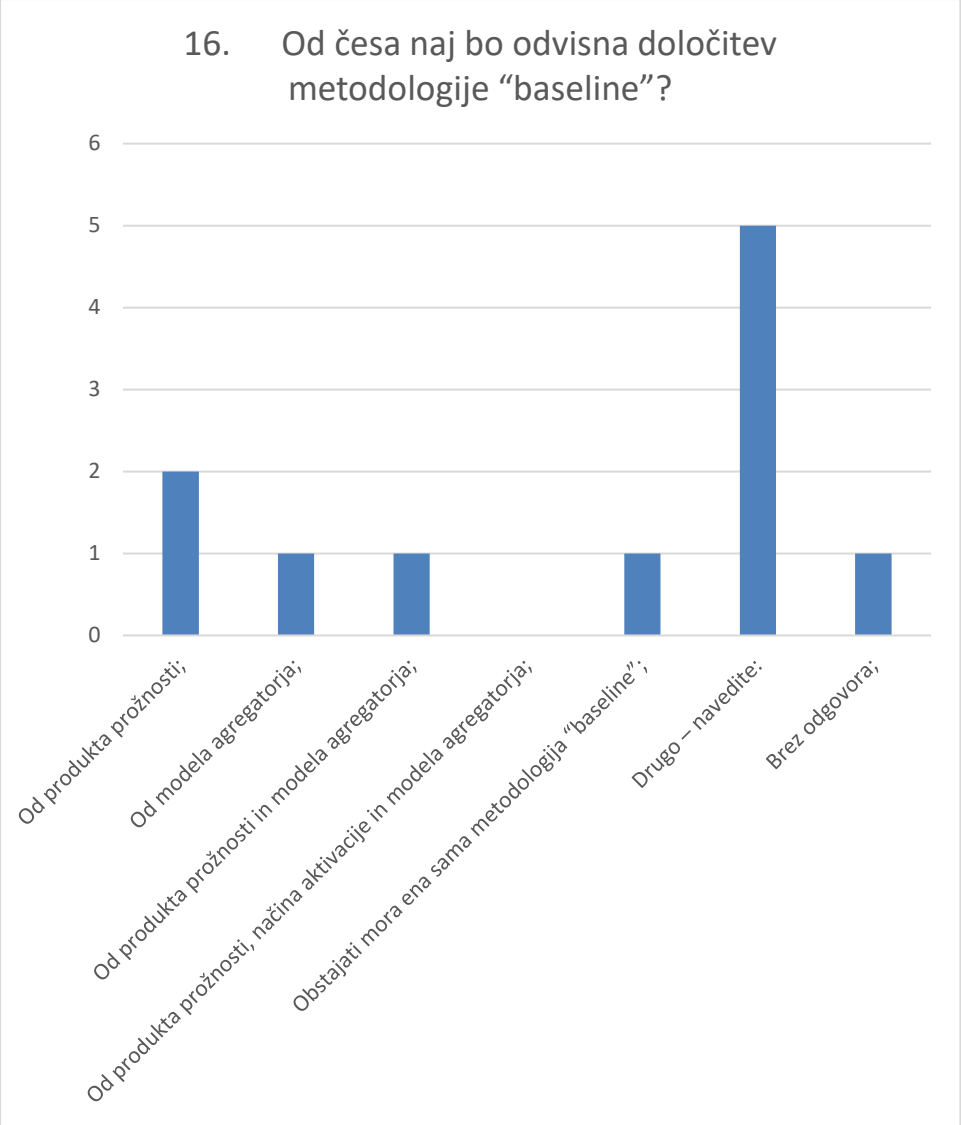
	zunanje profiliranje odjemalcev. Po avtomatiziranem sklepanj pogodb je treba preveriti le to ali je bila dogovorjena storite izvedeva v dogovorjenem obsegu in ob dogovorjenem času. Razen tega je to priložnost za razvoj povsem nove veje industrije za proizvodnjo ustrezne opreme, kar na nacionalnem nivoju lahko prinese pozitivne učinke v obliki nekaj 100 novih delovnih mest.



16. Od česa naj bo odvisna določitev metodologije "baseline"?

1	☒Od modela agregatorja; Komentar (izbirno): V osnovi naj gre za modele, ki se prilagajajo
2	☒Od produkta prožnosti; ☒Drugo – navedite: Menim, da je smiselno, da agregator sprotno izvaja napovedi za prihodnje ure za MM, ki sodelujejo v agregaciji in jih pošilja neodvisnemu organu, ki jih neprestano preverja z dejansko realizacijo teh MM. V primeru ponavljajočega odstopanja napovedi in meritev ob neaktiviranju agregacije za več kot nek odstotek, se agregatorju odvzame sposobnost izvajanja agregacije.
3	/
4	☒Drugo – navedite: Od produkta prožnosti, tipa vira in načina aktivacije. Metodologije naj bodo pred definirane. Komentar (izbirno): Za Eles je pomembno, da je določanje baseline preprosto za vse storitve, ki jih zakupi.
5	The baseline methodology should depend on the kind of DR delivered: i.e. the kind of product, and also of loads and consumers. For instance, for residential consumers, and small commercial, a real-time individually determined baseline is appropriate, i.e. considering that each site would have remained using the same power if it had not been briefly curtailed.

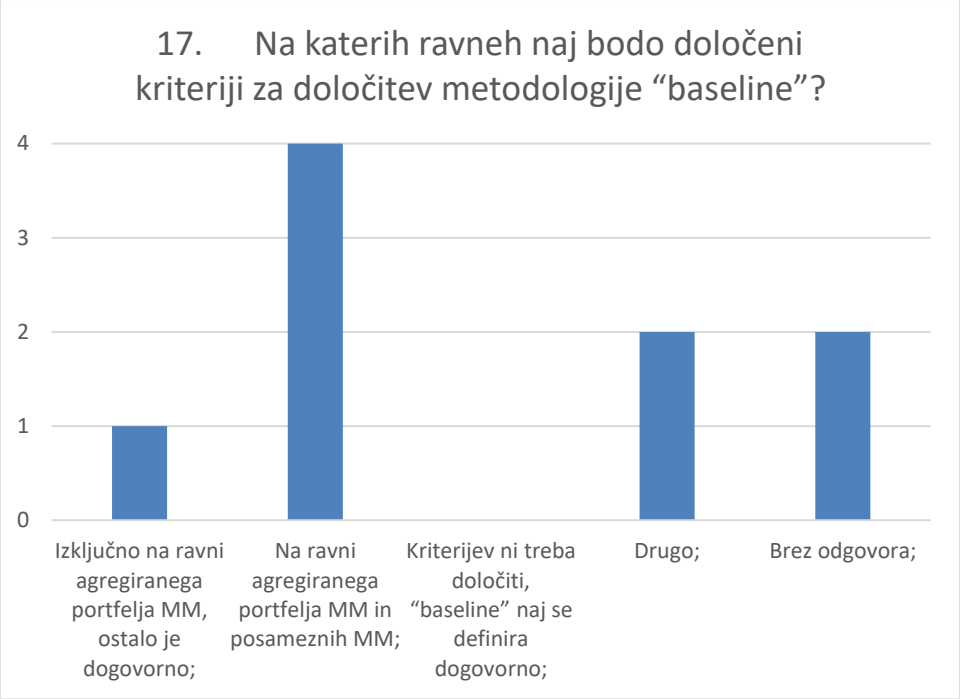
	No single baseline should be enforced. Any baseline methodology should be proposed by the aggregator and authorised by the NRA (or by the settlement entity, under supervision of the NRA).
6	☒Od produkta prožnosti in modela agregatorja;
7	☒Obstajati mora ena sama metodologija “baseline”; ☐Drugo – navedite: Tako kot danes obstaja in je v praksi lepo izvedljivo in točno merljivo. Base line je trenutni odjem, ki se z ustreznimi tehničnimi rešitvami uredi tako, da se vedno ve koliko bi bil base line tudi če nebi bilo aktivacije in se pri regulaciji dejansko upošteva samo razlika v 10 sek časovnih intervalih. Primer : Imamo sončno elektrarno, ki je priključena v omrežje z regulacijsko enoto, ki jo agregiramo. Pri uporabi take kombinacije je potrebno vzeti meritve z referenco sončne elektrarne iz referenčnega modula, ki je izvzet iz celotne sončne elektratne. Ta referenca stalno kaže pravo realno trenutno moč, ki jo je moč upoštevati pri vseh online meritvah. Takšna je praksa tudi pri naših partnerjih v tujini.
8	☒Drugo – navedite: Sama metodologija »baseline« ni tako pomembna; šteje točnost in natačnost napovedi in rezultata (glej odgovor na vprašanje št. 18).
9	☒Drugo – navedite: Glede na opisano v prejšnjih točkah dvomim, da je baseline potreben. Komentar (izbirno): Baseline izhaja iz obstoječega pogleda na izvajanje storitev prožnosti, oziroma sistemskih storitev. Tudi te je mogoče

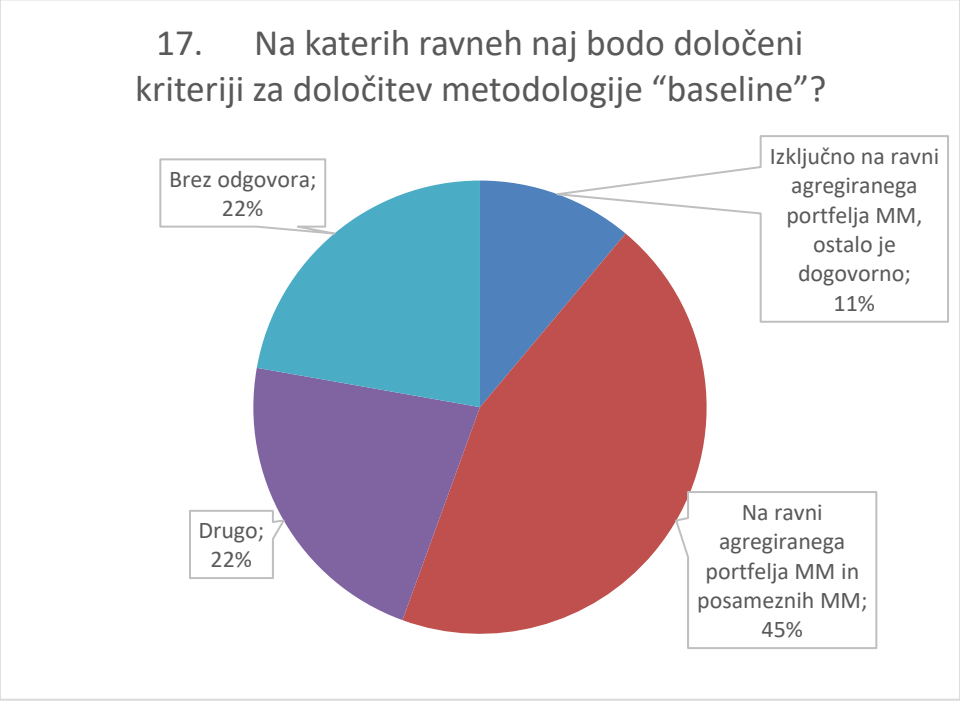


17. *Na katerih ravneh naj bodo določeni kriteriji za določitev metodologije “baseline”? Utemeljite svojo izbiro (zakaj menite, da je določena ureditev potrebna oziroma ni potrebna).*

1	☒Na ravni agregiranega portfelja MM in posameznih MM; Utemeljitev: Kriteriji določeni in pred začetkom potrjeni na ravni agregatorja
2	☒Na ravni agregiranega portfelja MM in posameznih MM; Utemeljitev: Obrazloženo v prejšnji točki
3	/
4	☒Na ravni agregiranega portfelja MM in posameznih MM Utemeljitev: Eles za obračun uporablja agregirane portfelijske podatke. Podatki posameznih MM uporabljamo za kontrolo kakovosti izvajanje storitve.
5	☒Izključno na ravni agregiranega portfelja MM, ostalo je dogovorno;

	Utemeljitev: The baseline may be determined using individual metering data and/or forecasts, but it should be used (and assessed as reliable and accurate or not) only at aggregated level.
6	/
7	☒Na ravni agregiranega portfelja MM in posameznih MM; Utemeljitev: NA na podlagi meritev MM in agregiranega signala preko portfeja NA izkazuje skupni regulacijski odmik.
8	☒Drugo – navedite: Baseline se mora določiti za vsako enoto posebej, pri čemer je lahko za podobne vrste enote podobni baseline (a vselej se določi posamezno).
9	☒Drugo – navedite: Glede na predhodne komentarje določitev baseline ni potrebna. Utemeljitev: Baseline je posledica mnenja, da je uporabnik omrežja nesposoben ustrezno oceniti svoje stanje trenutne porabe in svojega potenciala prožnosti, zato ga je treba profilirati od zunaj in določiti njegovo izhodiščno stanje oziroma baseline.



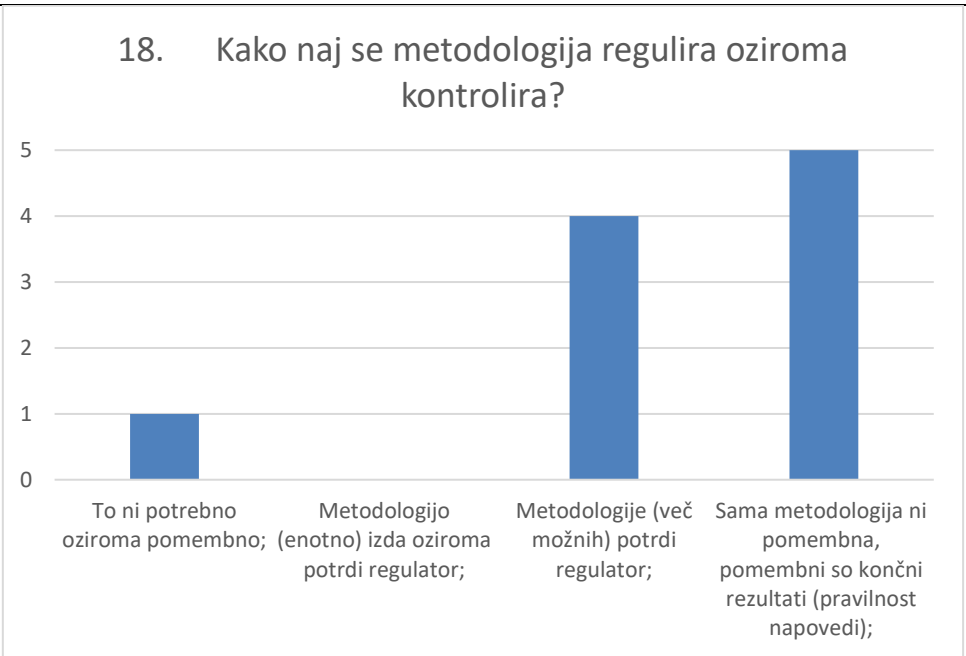


18. Kako naj se metodologija regulira oziroma kontrolira?

1	☒Sama metodologija ni pomembna, pomembni so končni rezultati (pravilnost napovedi);
2	☒Sama metodologija ni pomembna, pomembni so končni rezultati (pravilnost napovedi); Komentar (izbirno): Obrazloženo v prejšnji točki
3	☒Metodologije (več možnih) potrdi regulator;

4	☒Metodologije (več možnih) potrdi regulator; Komentar (izbirno): Da se izognemo neupravičenim zahtevam po uveljavljanju »eksotičnih« in »inovativnih« metodologij, je ključnega pomena, da jih neodvisno preveri in potrdi regulator.
5	☒Metodologije (več možnih) potrdi regulator; Komentar (izbirno): Any baseline methodology should be proposed by an aggregator and approved by the NRA (or, under the supervision of the NRA, by the settlement entity as per published rules approved by the NRA).
6	☒Sama metodologija ni pomembna, pomembni so končni rezultati (pravilnost napovedi);
7	☒To ni potrebno oziroma pomembno; Komentar (izbirno): V osnovi morajo biti (kot že zgoraj opisano) meritve MM in agregiran signal. Kontrola meritev MM in signala NA se stalno spremlja tudi do najvišjega nivoja za vsako enoto posebej. Kontrola je izravnava pri Borzenu – v nasprotnem primeru pride do odstopanj.
8	☒Metodologije (več možnih) potrdi regulator; ☒Sama metodologija ni pomembna, pomembni so končni rezultati (pravilnost napovedi); Komentar (izbirno): Kot omenjeno v odgovoru na vprašanje št.17 se mora baseline določiti za vsako enoto posebej, pri čemer je lahko za podobne vrste enote podobni baseline (a vselej se določi posamezno). Z vidika zagotavljanja transparentnosti in preprečevanja zlorab je ključno, da je metodologija za določitev predvidenih količin predpisana oz. določena vnaprej, v procesu kvalifikacije posamezne enote, ter na podlagi metodologije se pripravljena napoved posreduje s strani agregatorja Centralni Entiteti pred obdobjem aktivacije. V kolikor tekom izvajanja baseline napovedi Centralna Entiteta ugotovi znatno in ponavljajočo se pomanjkljivost v točnosti baseline napovedi, ima Centralna Entiteta pravico, da predlaga ustreznejšo metodologijo. Od ugotovitve pomanjkljivosti baseline napovedi s strani Centralne Entitete do implementacije ustreznejše metodologije na predlog Centralne Entitete se relevantno MM umakne iz portfelja agregatorja. Ključno pri implementaciji je tudi, da se zagotovi finančno nevtralni vpliv na dobavitelja, kar je možno preko modela Centralne Entitete (glej odgovor na vprašanje št. 11). V kolikor je zagotovljena finančna nevtralnost dobaviteljev, je za določanje metodologije baseline ključno prepoznati, da ima edino agregator dovolj relevantnega znanja, da določi relevantni baseline in metodologijo za izračun. Agregator baseline potem predlaga koristniku prožnosti (odvisno od segmenta – ELES za sistemske storitve, SODO/DSO za sistemske storitve na distribucijski ravni, BSP za wholesale trgovanje), koristnik prožnosti pa potrdi predlog, v kolikor ustreza, oz. se uskladi na ravni AGREGATOR<->KORISTNIK PROŽNOSTI, in se s tem seznani Centralno Entiteto. V

	kolikor pride do nestrinjanja, na koncu odloča Agencija (ampak izključno v primeru nestrinjanja). Agregator pred proženjem posameznega MM pošlje Centralni Entiteti vozni red proženja posameznega MM. Agregator sklene zaprto pogodbo s koristnikom prožnosti. Centralna entiteta na enostaven način določi odstopanja agregatorja, ki so nastala, kot razlika med napovedano in dejansko prožitvijo.
9	☒Sama metodologija ni pomembna, pomembni so končni rezultati (pravilnost napovedi); Komentar (izbirno): Ponovno moram ponoviti, da ideja o uvedbi baselinea izhaja iz mnenja, da je aktivnega odjemalca nujno profilirati od zunaj. Aktivni odjemalec je z ustrezno opremo v obliki primernega sistema za upravljanje z energijo sam in avtomatizirano sposoben agregatorju posredovati podatke o trenutne potencialu prožnosti in časovnem intervalu katerem ga lahko izvede.



19. *Med zaključki dela Rossetto, N.[1] je mogoče zaslediti naslednja priporočila za določitev »baseline« na podlagi izkušenj iz ZDA:*
    a) *Za energijske produkte je smiselno uporabiti oceno na podlagi zgodovine odjema v dnevih, ki jim neposredno sledi aktivacija.*
    b) *Nasprotno, pa je za sistemske storitve na podlagi aktivnega odjema bolje pogledati razliko med odjemom neposredno pred aktivacijo in odjemom neposredno po aktivaciji.*

[1] Rossetto, N. (2018), 'Measuring the intangible: an overview of the methodologies for calculating customer baseline load in PJM', FSR Policy Brief 2018/05 (http://hdl.handle.net/1814/54744)

c) *Za produkte povezane z zmogljivostjo, se »baseline« lahko določi iz največje stopnje odjema zabeležene v predhodnem letu s strani ponudnika storitve, ki se pojavi istočasno kot največji odjem celotnega elektroenergetskega sistema.*

Nadalje, priporočila glede določitve »baseline« je podal tudi USEF[2] in sicer na ravni posameznih produktov in modelov.

Kakšno je vaše mnenje glede podanih predlogov in posameznih sklopov produktov/storitev?

1	/
2	Podan v prejšnji točki
3	/
4	Pri določanju baseline za sistemske storitve zagovarjamo princip iz točke b, ki pa se jih v odvisnosti od dolžine intervala nudenja storitve kombinira s principi iz točke a.
5	Unfortunately, the American study did not take into consideration the EU market design and products, so that it cannot be used. The USEF report was an early analysis, and most of it does not comply with the CEP any more. Besides, it failed to encompass residential sector properly. And it was inspired mainly by utilities with little experience if any in DR participation. Our recommendations are based on a wide experience in various countries (and comply with the CEP). For instance, after several years using data from T&DSO meters, France recently moved to using submetering data provided the aggregator, to improve accuracy and reliability.
6	/
7	Base line se lahko določi samo na podlagi b) predloga. Za določanje aktivnega odjema se pogleda 5min pred aktivacijo (kot je danes standard B-5min). V primeru, da preidemo na 15 minutno bilančno netiranje je realno možna samo varianta b). Ostale variante so za energetski sistem zelo nepredvidljive in v določeni trenutni situaciji lahko tudi nerealne.
8	Glej odgovor na vprašanje št. 18
9	Glede na predhodno podane komentarje lahko samo ponovim, da je baseline nepotreben, če je aktivni odjemalec sam sposoben agregatorju posredovati podatke o trenutnem potencialu prožnosti in časovnem intervalu v katerem ga lahko ponudi.

20. *Ali morda na podlagi vseh informacij lahko opredelite najustreznejše metodologije za določitev »baseline« (na ravni produktov/modelov ali splošno)? Prosimo vključite utemeljitev.*

1	/
2	Menimo, da baseline modelov ni potrebno predpisati. Napovedi odjema naj izvede agregator. Neodvisni organ jih naj preveri. Če so bile napovedi v primerjavi realizacijo ob neaktivaciji slabe, se lahko akregatorju odvzame status agregatorja.
3	/

[2] https://www.usef.energy/app/uploads/2017/09/Recommended-practices-for-DR-market-design-2.pdf (Poglavje 6.2)

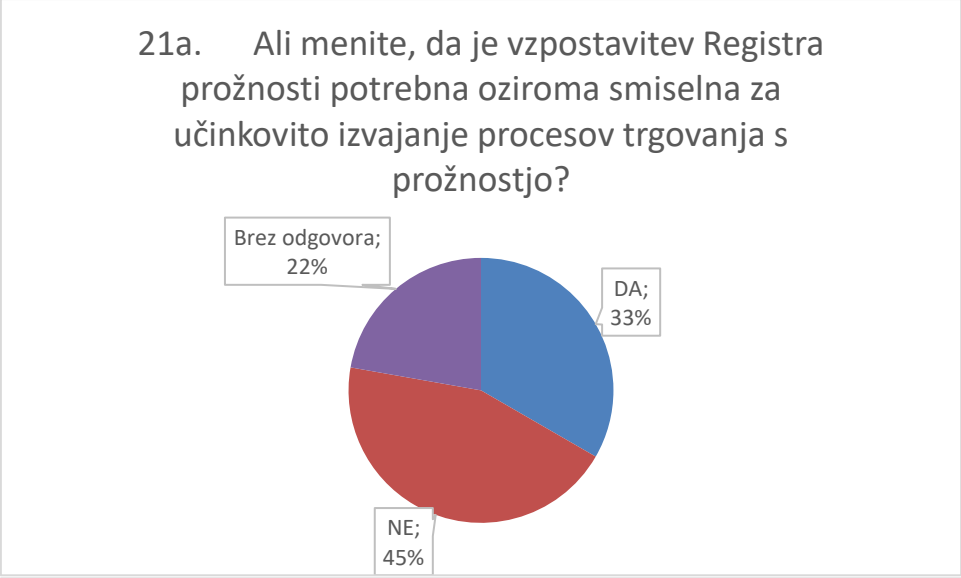
4	/
5	Baseline methodology depends on the kind of DR operated (market/product, flexibility resources, operation mode). Rules should define how an aggregator can propose an appropriate methodology, how this will be assessed (criteria and required efficacy) and approved.
6	/
7	Kot je že pojasnjeno v odgovorih na prejšnja vprašanja.
8	Glej odgovor na vprašanje št. 18
9	Glede na predhodno podane komentarje lahko samo ponovim, da je baseline nepotreben, če je aktivni odjemalec sam sposoben agregatorju posredovati podatke o trenutnem potencialu prožnosti in časovnem intervalu v katerem ga lahko ponudi.

Vzpostavitev registra prožnosti

21. *Register prožnosti se kaže kot učinkovita rešitev pri izvajanju storitev prožnosti na integriranih ali povezanih trgih in intenzivni koordinaciji OPS, ODS in OT.*
    a. *Ali menite, da je vzpostavitev Registra prožnosti potrebna oziroma smiselna za učinkovito izvajanje procesov trgovanja s prožnostjo?*

1	☒DA;
2	☒DA; Komentar (izbirno): Glede na koncepti, ki smo ga zagovarjali v prejšnjem poglavju se nam zdi nujna vzpostavitev organa in registra.
3	/
4	☒DA;
5	☒NE;
6	/
7	☒NE; Komentar (izbirno): Vzpostavitev registra prožnosti po našem mnenju ne bi imela vpliva na učinkovitost izvajanja procesov.
8	☒NE; Komentar (izbirno): Trenutno ne obstaja težava, ki bi jo rešil register prožnosti kot predlagan, oz. je obstoj podatkov (npr. ELES, SODO/DSO) in izmenjava le-teh (npr. AGR->ELES) dovolj robustna za trenutno fazo razvoja trga. Za implementacijo modela Centralne Entitete (Borzen) v vseh predlaganih alternativah (glej odgovor na vprašanje št. 11) je dovolj, da se Borzenov »register trga z elektriko« nadgradi z podatki o aktivacijah (in vzpostavi VMMP v primeru implementacije preko virtualnih merilnih mest prožnosti) oz. ustrezno poveže z »bazo merilnih podatkov« (s strani sistemskih operaterjev). Zaradi tega tudi

	ne vidimo potrebe, da bi se na tej točki tovrstni register prožnosti (kot predlagan v posvetovalnem dokumentu, ki omogoča real-time izmenjavo vseh podatkov med vsemi deležniki) vzpostavil. Dodatno je z vidika dobaviteljev pomembno izpostavitvi, da bi vzpostavitev registra prožnosti izjemno povečala kompleksnost izmenjave podatkov, ki za dejavnosti dobaviteljev niso potrebni in vnaša dodatne, nepotrebne ovire, zato nasprotujemo uvedbi registra prožnosti kot predstavljen v posvetovalnem dokumentu. V kolikor bo razvoj trga in razširitev tako koristnikov prožnosti (sistemske storitve wholesale trg) kot sodelujočih odjemalcev (B2B GOS) in povezava le-teh občutno povečala kompleksnost, katero bi lahko uvedba registra prožnosti zmanjšala, se naj o tem razmisli takrat oz. ob zato primerni časovni točki uvedbe trga prožnosti v SI.
9	☒NE; Komentar (izbirno): Register prožnosti je nekaj, kar je morebiti smiselno za izvajanje storitev prožnosti za potrebe operaterja sistema. Če agregatorji razpolagajo s sprotnimi in svežimi podatki o potencialu prožnosti in časovnem intervalu v katerem jih ponujajo aktivni odjemalci v omrežju, ki te podatke tudi sproti posredujejo, register prožnosti izgubi svoj pomen in vlogo.



b. *Ali so vam znane še kakšne druge primerljive konceptualne rešitve? Kakšne so njihove prednosti in slabosti v primerjavi z Registrom prožnosti?*

1	/
2	Ne
3	/
4	Da, npr. avstrijski projekt flexHUB. Premalo poznamo podrobnosti, da bi se lahko opredelili do prednosti in slabosti.
5	/
6	/
7	Ne
8	Glej odgovor na vprašanje št. 21(a)
9	Če je aktivni odjemalec sam sposoben agregatorju sproti posredovati podatke o trenutnem potencialu prožnosti in časovnem intervalu v katerem lahko storitve prožnosti tudi ponudi in izvede, so registri prožnosti nepotrebni ali pa je njihova vsebina zelo omejena.

c. *Kako lahko Register prožnosti dopolnjuje obstoječa podatkovna vozlišča v Sloveniji? Utemeljite.*

1	Izboljšuje celovitost informacij in s tem izkoriščenost virov
2	S preverjanjem ustreznosti napovedi agregatorja.
3	Če bo ponudba storitev prožnosti zbrana na enem mestu, bo to koristno za vse uporabnike distribucijskega sistema in njegove deležnike. Primer: za prioritete – vrstni red odziva zainteresiranim deležnikom (opomba: metoda semaforja iz dokumenta AGEN iz jeseni 2019).
4	/
5	/
6	/
7	Lahko olajša dostop do relevantnih informacij za ponudnike in iskalce storitev izravnave.
8	Glej odgovor na vprašanje št. 11 in 21(a))
9	V registru prožnosti naj bo koda aktivnega odjemalca potrebna za povezavo z agregatorji, povezava do njegovega MM in koda za avtomatizirano sklepanje pogodb.

22. *Kakšne pravice in obveznosti pričakujete kot ponudnik storitev v okviru Registra prožnosti (npr. učinkovit dostop do registra, obveznost obveščanja v primeru spremembe pogodb, obveznost posodabljanja ostalih parametrov)?*

1	Stalen dostop do ažurnega registra
2	Vsaj naštete.
3	/
4	N/A
5	/
6	/
7	Vse zgoraj navedeno.
8	Glej odgovor na vprašanje št. 21(a)
9	Vse navedeno. Sklepanje pogodb za izvajanje storitev prožnosti bi moralo biti avtomatizirano (tehnologija veriženja blokov ali podobna)

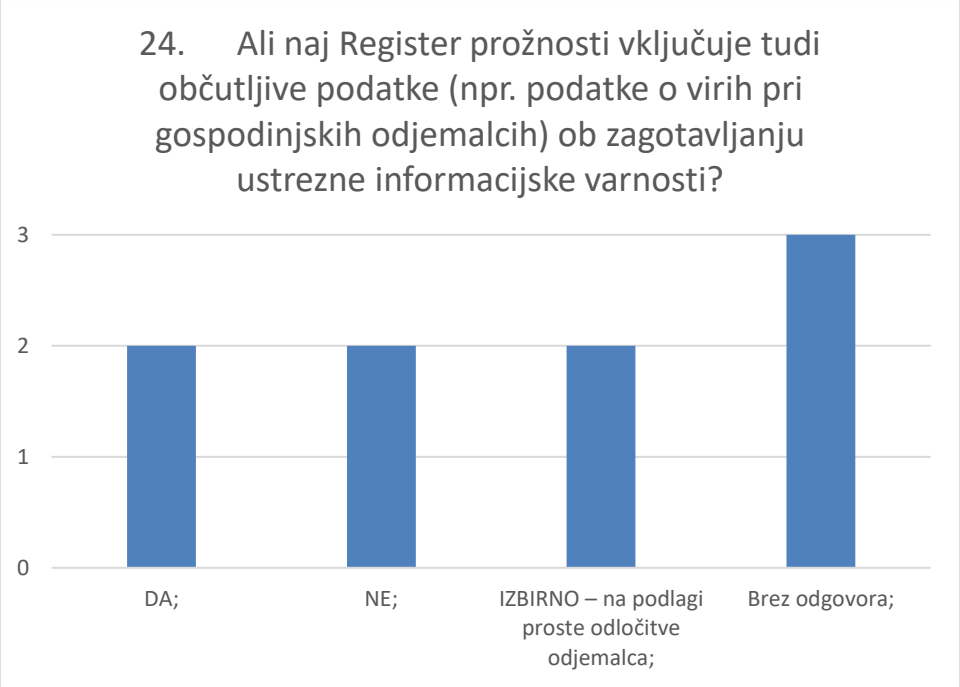
23. *Katere funkcije Registra prožnosti morajo ostati v regulirani domeni in katere so lahko del komercialne domene?*

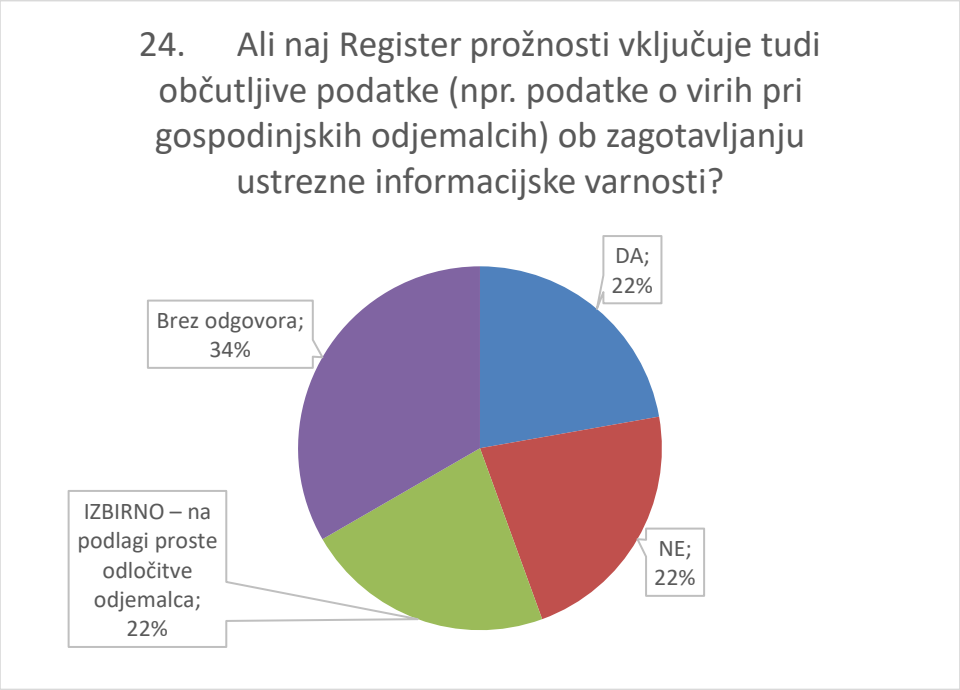
1	Predvsem je pomembna zaščita osebnih podatkov, v splošnem pa velja da morajo vsi udeleženci dobiti vse podatke za svoje delovanje
2	Menimo, da bi register prožnosti moral biti v regulirani domeni.
3	/
4	Menimo, da morajo biti vse funkcije Registra prožnosti regulirane in dostopne vsem zainteresiranim uporabnikom.
5	/

6	/
7	/
8	Vsi podatki, ki se izmenjujejo, morajo ostati izključno in samo v regulirani domeni.
9	Če že mora obstajati centrali register prožnosti naj regulirani del obsega koda aktivnega odjemalca potrebna za povezavo z agregatorji, povezava do njegovega MM in koda za avtomatizirano sklepanje pogodb. Komercialnega dela ni. Podatki iz reguliranega dela morajo biti dovolj , da aktivni odjemalec lahko vzpostavi komunikaciji z agregatorjem.

24. Na splošno velja, da mora biti čim več podatkov na voljo za razvoj novih storitev prožnosti. Ali naj Register prožnosti vključuje tudi občutljive podatke (npr. podatke o virih pri gospodinjskih odjemalcih) ob zagotavljanju ustrezne informacijske varnosti?

1	☒DA;
2	☒DA;
3	/
4	☒IZBIRNO – na podlagi proste odločitve odjemalca;
5	/
6	/
7	☒IZBIRNO – na podlagi proste odločitve odjemalca;
8	☒NE;
9	☒NE;





25. Prepričanje nekaterih ponudnikov storitev je, da je uvedba najnovejših IKT tehnologij stroškovno neupravičena. Pogoj za uporabo Registra prožnosti kot tudi drugih podatkovnih vozlišč bo med drugim tudi zagotavljanje minimalne ravni skladnosti s standardi na področju kibernetske varnosti. Kakšno je vaše mnenje glede zmožnosti oziroma pripravljenosti prilagoditev ponudnikov prožnosti tovrstnim zahtevam?

1	Vsi udeleženci morajo zagotavljati ustrezne ravni skladnosti s standardi na področju kibernetske varnosti
2	Menimo, da morajo agregacije izkazati cenovno učinkovitost v primerjavi z obstoječimi rešitvami.

	Zagovarjamo pristop, ki omogoča vsem deležnikom enakopraven položaj (odjemalcem, dobaviteljem, agregatorjem) in nikogar ne prikrajša.
3	/
4	N/A
5	/
6	/
7	/
8	Skladno z odgovorom na vprašanje št. 11 in 21(a)) je za implementacijo modela Centralne Entitete potrebna le nadgraditev oz. povezovanje med Borzenovim 'registru trga' in bazo merilnih podatkov (SODO/ODS), pri čemer morajo ponudniki prožnosti že danes izpolnjevati zahteve za kibernetsko varnost za dostop oz. izmenjavo podatkov s temi registri.
9	Agregator v registru prožnosti dobi samo podatke, ki so potrebni, da se lahko aktivni odjemalec poveže z agregatorjem. Sprotne podatke o potencialu prožnosti in časovnem intervalu v katerem te storitve lahko izvede aktivni odjemalec sproti posreduje agregatorju. To je vse kar agregator potrebuje za svoje delo. Drugih podatkov ne rabi. Agregator ne sme profilirati aktivnega uporabnika ali zbirati informacij o njem.

Obveščanje

26. Kako naj bi po vašem mnenju potekalo obveščanje glede storitev prožnosti? Razmislite tako o vzpostavitvi storitve na posameznem MM kot tudi o izvajanju storitev (»aktivacije prožnosti«).

1	Preko enotnega portala, preko katerega bo tako potekala izmenjava ustreznih podatkov
2	Menimo, da lahko zgolj neodvisen in reguliran organ nadzoruje izvedbo prožnosti. Preko tega nadzora je enostavno vzpostaviti sistem obveščanja tudi na ravni MM. Nadalje pa je najustreznejši tehnični način za porazdelitev izvedene agregacije po principu split supply, kjer pripada dobavitelju baseline profil, agregatorju pa razlika med napovedjo in baseline.
3	Obveščanje naj poteka skladno s predlogom v posvetovalnem dokumentu.
4	Omejitve, ki jih podata OPS in ODS, morajo biti pri uporabi prožnosti ustrezno upoštevane pri obveščanju/sporočanju razpoložljivosti glede prožnosti posameznim agregatorjem oziroma uporabnikom storitev.
5	Only realized DR curtailment at potfolio level (aggregated, not at MM).
6	/
7	Na dnevni bazi se pošilja podatke o aktivacijah posameznim MM za pretekli dan v resoluciji obračunskega intervala.
8	V predlogu modela Centralne Entitete (glej odgovor na vprašanje št. 11) in pred eventualno vzpostavitvijo registra prožnosti (ki na tej točki razvoja trga ni potreben), agregator o izvedeni aktivaciji obvešča vselej in izključno koristnika prožnosti (torej ELES, SODO/DSO, BSP) ter BORZEN kot Centralno Entiteto. Centralna Entiteta mora

	zagotoviti, da so končni obračunski podatki, katere pridobi dobavitelj, pravilni upoštevajoč alokacijo količin aktivacije, ter s tem zagotovi finančno nevtralni vpliv aktivacije na dobavitelja.
9	Aktivni odjemalec sproti posreduje agregatorju podatke o trenutnem potencialu prožnosti, ki ga ponuja za aktivacijo in časovnem intervalu za katerega za ponuja. Omenjene podatke je mogoče posredovati po internetnem omrežju, po njem pa pridejo tudi zahteve za aktivacijo. Izjema so lahko storitve prožnosti, ki bi se uporabljale na primer za sistemske storitev vzdrževanja frekvence, kjer bi bila potreba ciljna komunikacijska oprma z ustreznimi lastnostmi.

27. *Če ste, ali boste predvidoma v prihodnje v vlogi agregatorja – kaj menite glede možnosti posredovanja naslednjih podatkov?*

1	*PODATKI*	*IZVEDLJIVOST*	*KOMENTAR*
	Dnevno – aktivacije na nivoju MM	☒DA; ☐NE; ☐DELNO;	
	Dnevno – realizacije na nivoju MM	☒DA; ☐NE; ☐DELNO;	
	Dnevno – aktivacije agregirano po DOB	☒DA; ☐NE; ☐DELNO;	
	Dnevno – realizacije agregirano po DOB	☒DA; ☐NE; ☐DELNO;	
2	*PODATKI*	*IZVEDLJIVOST*	*KOMENTAR*
	Dnevno – aktivacije na nivoju MM	☒DA; ☐NE; ☐DELNO;	
	Dnevno – realizacije na nivoju MM	☒DA; ☐NE; ☐DELNO;	
	Dnevno – aktivacije agregirano po DOB	☒DA; ☐NE; ☐DELNO;	
	Dnevno – realizacije	☒DA; ☐NE; ☐DELNO;	

	agregirano po DOB		
3	*/*		
4	Dodatni komentar (izbirno): N/A		
5	*PODATKI*	*IZVEDLJIVOST*	*KOMENTAR*
	Dnevno – aktivacije na nivoju MM	☐DA; ☒NE; ☐DELNO;	
	Dnevno – realizacije na nivoju MM	☐DA; ☒NE; ☐DELNO;	
	Dnevno – aktivacije agregirano po DOB	☐DA; ☒NE; ☐DELNO;	
	Dnevno – realizacije agregirano po DOB	☒DA; ☐NE; ☐DELNO;	The information should be made available: - by the aggregator to the settlement entity at aggregated level (and details only when compliance check needed). - to other market parties, only at nationallyaggregated level (not per aggregator), and only if several aggregators operate (so as to protect commercially sensitive information)
6	*/*		
7	*PODATKI*	*IZVEDLJIVOST*	*KOMENTAR*
	Dnevno – aktivacije na nivoju MM	☒DA; ☐NE; ☐DELNO;	Se že izvaja.
	Dnevno – realizacije na nivoju MM	☐DA; ☐NE; ☒DELNO;	Se izvaja mesečno, ko NA (PSI) prejme obračunske podatke OPS.
	Dnevno – aktivacije agregirano po DOB	☒DA; ☐NE; ☐DELNO;	Se že izvaja.
	Dnevno – realizacije agregirano po DOB	☐DA; ☐NE; ☒DELNO;	Se izvaja mesečno, ko NA (PSI) prejme obračunske podatke OPS.

8

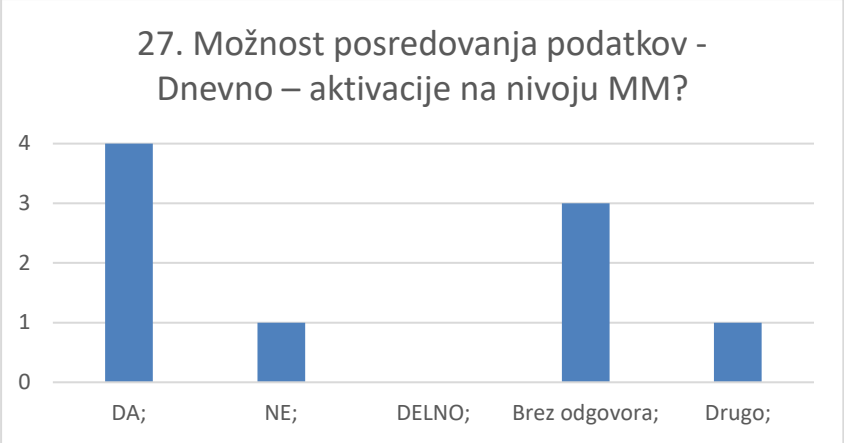
PODATKI	*IZVEDLJIVOST*	*KOMENTAR*
Dnevno – aktivacije na nivoju MM	☐DA; ☐NE; ☐DELNO;	Glej odgovor na vprašanje št. 26 in komentar spodaj
Dnevno – realizacije na nivoju MM	☐DA; ☐NE; ☐DELNO;	Glej odgovor na vprašanje št. 26 in komentar spodaj
Dnevno – aktivacije agregirano po DOB	☐DA; ☐NE; ☐DELNO;	Glej odgovor na vprašanje št. 26 in komentar spodaj
Dnevno – realizacije agregirano po DOB	☐DA; ☐NE; ☐DELNO;	Glej odgovor na vprašanje št. 26 in komentar spodaj

Dodatni komentar (izbirno):
Relacije med agregatorjem, koristnikom prožnosti (npr. ELES za sistemske storitve), in virom prožnosti so danes že definirane in ni razloga za spremembe, posebej ob uveljavitvi modela Centralne Entitete, ki zagotavlja finančno nevtralen in administrativno najmanjši vpliv na dobavitelja.

9

PODATKI	*IZVEDLJIVOST*	*KOMENTAR*
Dnevno – aktivacije na nivoju MM	☒DA; ☐NE; ☐DELNO;	
Dnevno – realizacije na nivoju MM	☒DA; ☐NE; ☐DELNO;	
Dnevno – aktivacije agregirano po DOB	☒DA; ☐NE; ☐DELNO;	
Dnevno – realizacije agregirano po DOB	☒DA; ☐NE; ☐DELNO;	

Dodatni komentar (izbirno):
V vseh primerih je treba zagotoviti ustrezno izmenjavo podatkov, po možnosti v realnem ali kvazi realnem času. Posredovanje podatkov za prejšnji dan je nesprejemljiva in onemogoča večje izkoriščanje storitev prožnosti za potrebe bilančnih skupin, saj te večinoma nimajo na voljo sprotnih podatkov o proizvodnji in porabi.


27. Možnost posredovanja podatkov - Dnevno – aktivacije na nivoju MM?
4
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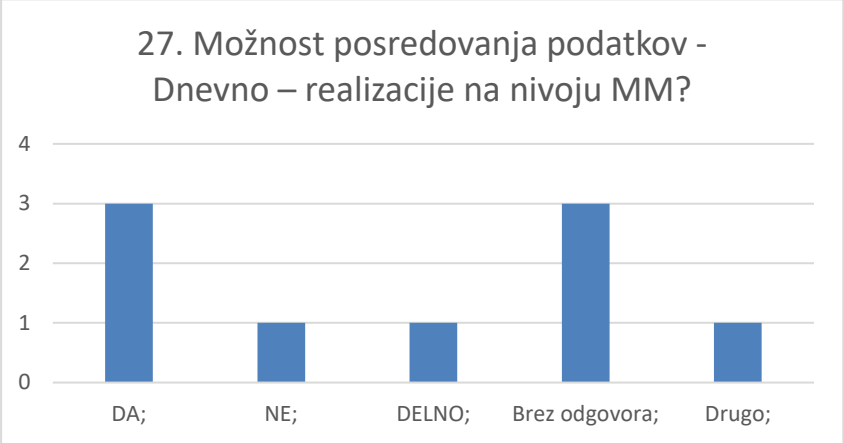
DA;
NE;
DELNO;
Brez odgovora;
Drugo;


27. Možnost posredovanja podatkov - Dnevno – realizacije na nivoju MM?
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DA;
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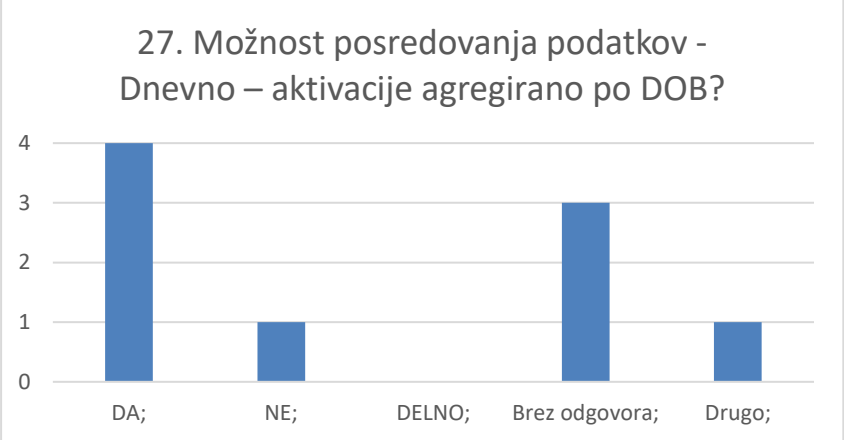
DELNO;
Brez odgovora;
Drugo;


27. Možnost posredovanja podatkov - Dnevno – aktivacije agregirano po DOB?
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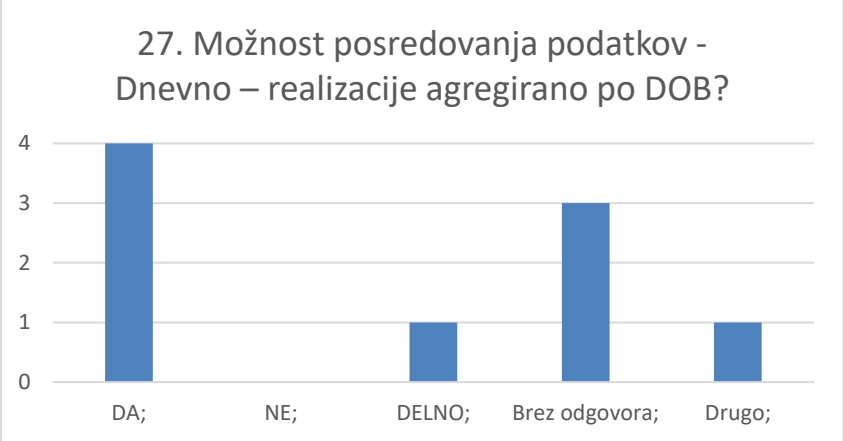
DA;
NE;
DELNO;
Brez odgovora;
Drugo;


27. Možnost posredovanja podatkov - Dnevno – realizacije agregirano po DOB?
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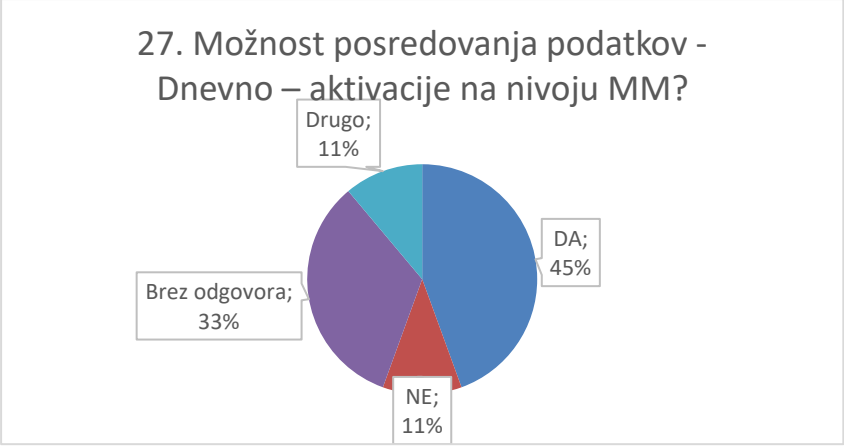
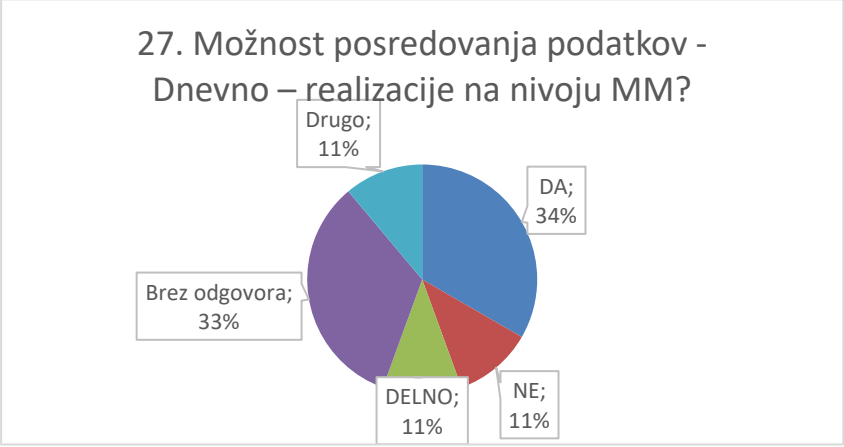
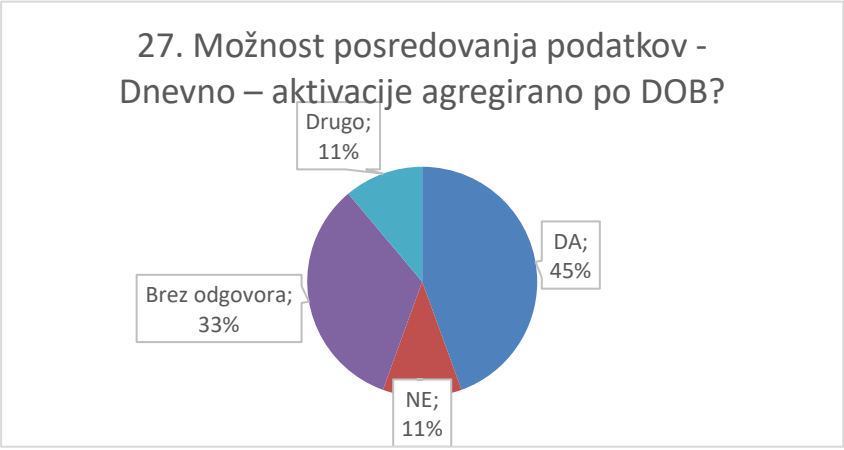
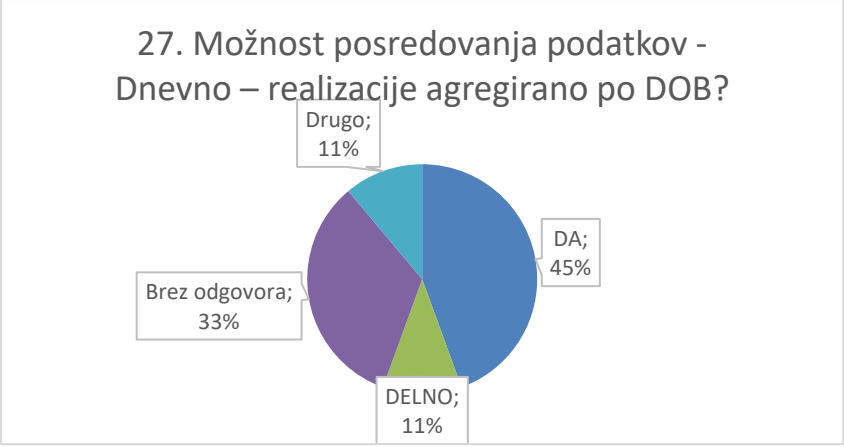
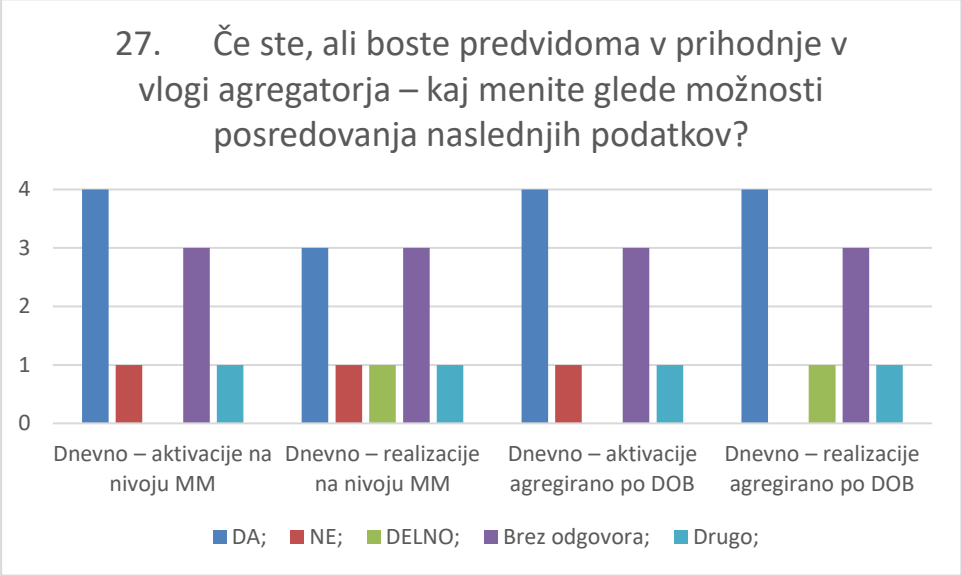
3
2
1
0
DA;
NE;
DELNO;
Brez odgovora;
Drugo;


27. Možnost posredovanja podatkov - Dnevno – aktivacije na nivoju MM?
Drugo; 11%
DA; 45%
Brez odgovora; 33%
NE; 11%


27. Možnost posredovanja podatkov - Dnevno – realizacije na nivoju MM?
Drugo; 11%
DA; 34%
Brez odgovora; 33%
DELNO; 11%
NE; 11%


27. Možnost posredovanja podatkov - Dnevno – aktivacije agregirano po DOB?
Drugo; 11%
DA; 45%
Brez odgovora; 33%
NE; 11%

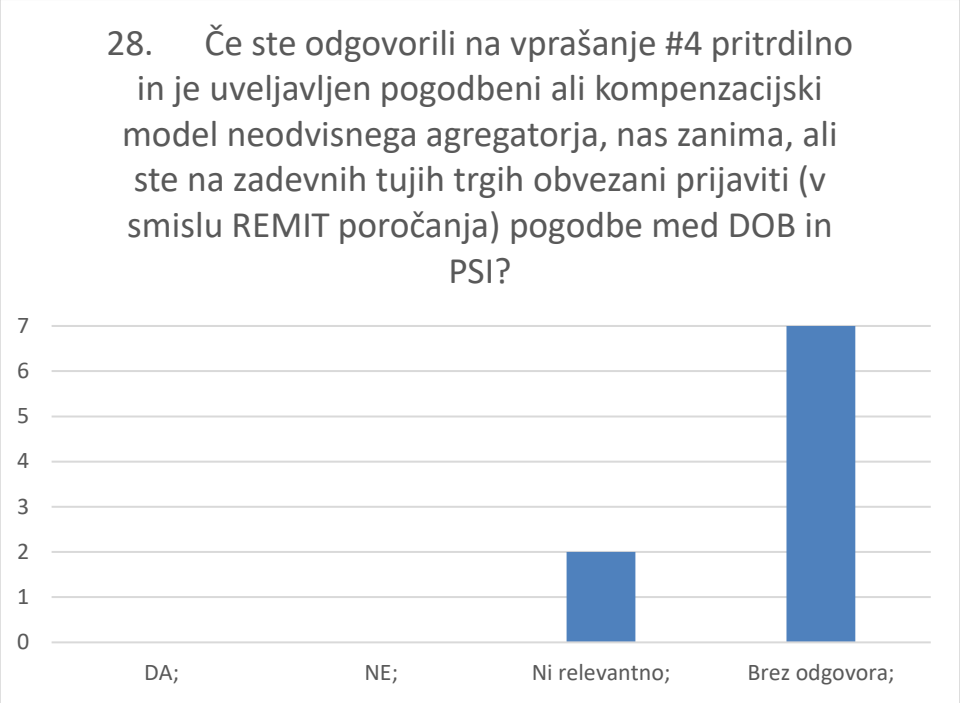


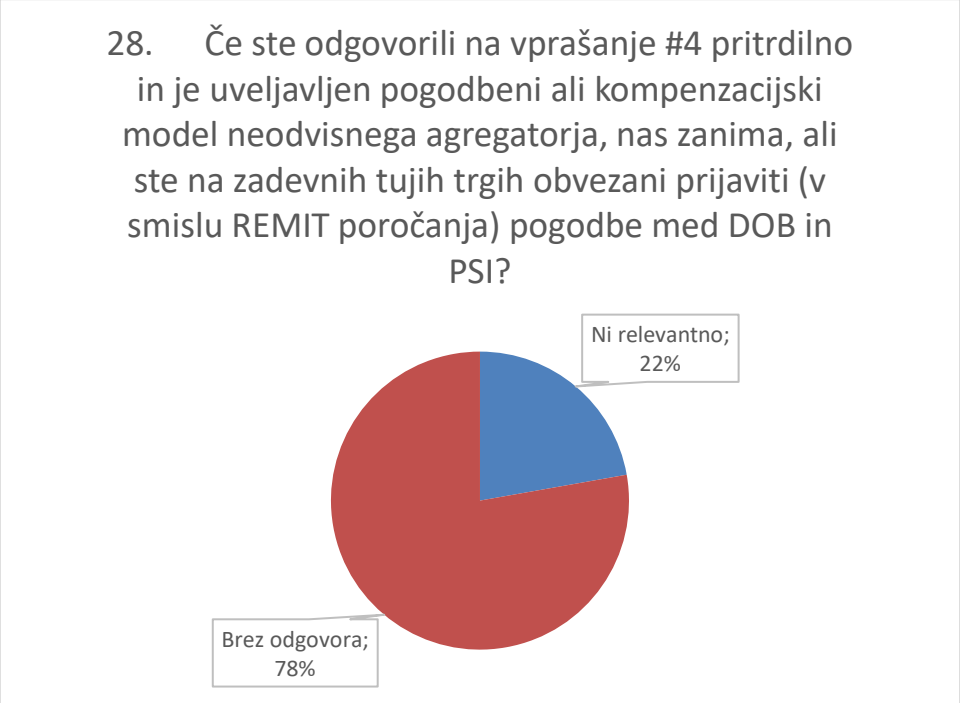


Vidiki REMIT

28. *Če ste odgovorili na vprašanje #4 pritrdilno in je uveljavljen pogodbeni ali kompenzacijski model neodvisnega agregatorja, nas zanima, ali ste na zadevnih tujih trgih obvezani prijaviti (v smislu REMIT poročanja) pogodbe med DOB in PSI?*

1	/
2	/
3	/
4	☒Ni relevantno;
5	/
6	/
7	☒Ni relevantno; Prost odgovor: Trenutno še nismo prisotni na tujih trgih kot NA.
8	/
9	Odgovor na točo 4 je bil ne!



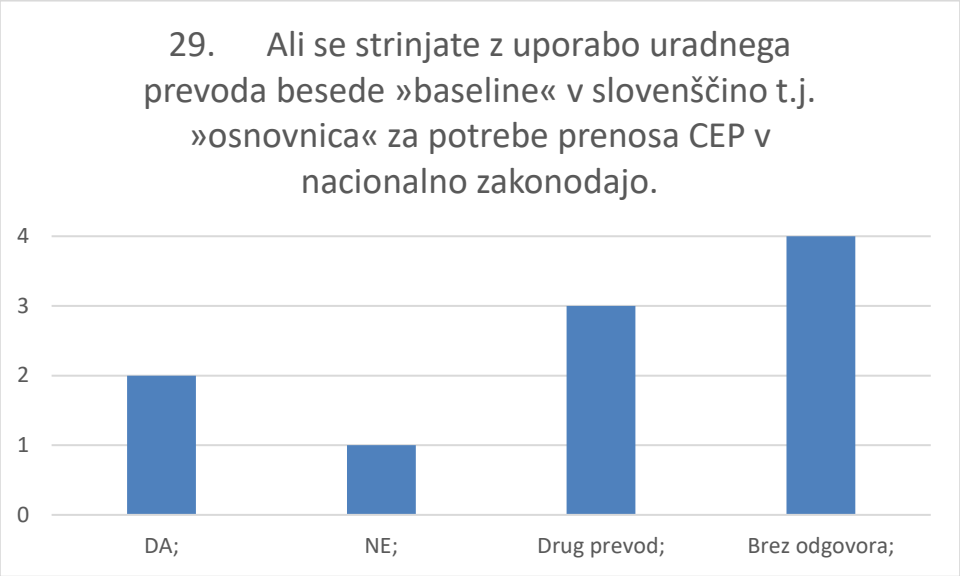


Splošno

29. Ali se strinjate z uporabo uradnega prevoda besede »baseline« v slovenščino t.j. »osnovnica« za potrebe prenosa CEP v nacionalno zakonodajo.

1	☒DA; Komentar (izbirno): Kaj če ostane kar original v angleščini, ki je bolj poveden?

2	☒Drug prevod – navedite in utemeljite: Ne bi prevajali
3	/
4	☒Drug prevod – navedite in utemeljite: Predlagamo uporabo »bazna moč«.
5	/
6	/
7	☒NE; ☒Drug prevod – navedite in utemeljite: Bazna moč Komentar (izbirno): Bazna moč – baseline - trenutna odjemna/oddajna moč na MM brez aktivacije. To se v praksi v strokovnem delu uporablja že leta in bi bilo to zaradi splošnega razumevanja nesmiselno spreminjati.
8	/
9	☒DA;



30. *Prosimo, podajte svoje komentarje, razmišljanja, predloge oziroma pripombe k posvetovalnemu dokumentu, ki bi lahko pripomogle k strokovni obravnavi zadevnega področja.*

1	Osnovna odlika vsakega dokumenta mora biti jasnost in razumljivost. Za nekatera poglavja tega dokumenta to ne velja.
2	Menimo, da lahko zgolj neodvisen reguliran organ nadzoruje izvedbo prožnosti. Preko tega nadzora je enostavno vzpostaviti sistem obveščanja tudi na ravni MM. Nadalje pa je najustreznejši tehnični način za porazdelitev izvedene agregacije po principu split supply, kjer pripada dobavitelju baseline profil, agregatorju pa razlika med napovedjo in baseline.

3	ODS na trgu storitev prožnosti nastopa nevtralno, saj trg ne sodi v njegovo področje delovanja. Menimo pa, da se morajo učinki storitev prožnosti meriti na omrežju in v končni fazi pri (predvsem velikih) uporabnikih distribucijskega sistema. Priložen skupni dopis ELES in SODO, št. ELES ES20025060 SODO-354/2020, z dne 22. 6. 2020 *(za podrobnosti glej **DODATEK A – dopis SODO/ELES** spodaj)*.
4	V skladu s dopisom ELES in SODO št. ELES - ES20025060 in SODO-354/2020 z dne 22. 6. 2020 predlagamo, da se v posvetovalni dokument na straneh 34 in 36 vključi še tekst v narekovajih: »Ključni pogoj za izvajanje storitev prožnosti je, … *(za nadaljevanje glej **DODATEK A – dopis SODO/ELES** spodaj)*«.
5	Glej ***DODATEK B – kompleten odziv Koalicije evropskih agregatorjev DR4EU*** *spodaj.*
6	/
7	Ta dokument predvsem poizkuša rešiti odnose med dobaviteljem in neodvisnim agregatorjem. Kot smo navedli že v samih odgovorih na vprašanja, lahko že danes NA postane tudi DOB ali DOB postane NA in potem ti modeli pri MM niso potrebni. Ker pa to ni povsod smiselno in bo tudi v praksi težje izvedljivo, je potrebno slediti obstoječemu modelu z možnostjo split supply.
8	/
9	Dokument gleda na storitve prožnosti iz gledišča, ki ga imamo danes in je premalo usmerjen v prihodnost. Upam, da bodo storitve prožnosti s pridom izkoriščale tudi bilančne skupine in operaterji distribucijskih omrežij in ne samo sistemski operater, kot je primarno predvideno v predlogu dokumenta. Če se želi uvesti trg prožnosti bo verjetno smiselno uvesti spremembe tudi na obstoječem trgu energije. Dokument ne kaže na to, da bi se časovni interval za zamenjavo dobaviteljev zmanjšal na en dan ali eno uro, kar bi dobavitelje prisililo v sodelovanje z agregatorji, nadomestil za spremembo profila zaradi izvajanja storitev prožnosti pa ne bi bilo. Motim me, da se na aktivnega odjemalca gleda kot na objekt, ki ga je treba profilirati od zunaj, ker je sam očitno preneumen in nesposoben, da bi sam znal povedati kaj lahko v danem trenutku ponudi na področju storitev prožnosti in v kašnem časovnem intervalu je sposoben to izvesti. Pri tem se pozablja, da je ravno to področje, ki ob ustrezni implementaciji storitev prožnost lahko omogoči razvoj domače industrije za proizvodnjo rešitev na tem področju. S tem se lahko omogoči zaposlitev nekaj 100 ljudi in zagotovi pozitivne in morda celo multiplikativne učinke uvajanja storitev prožnost energije na nacionalnem nivoju.

DODATEK A – dopis SODO/ELES

Družbi SODO in ELES, v vlogi ODS in OPS predlagata dopolnitev posvetovalnega dokumenta, kot označeno v le tem na straneh 34 in 36 in v dopisu, št. ELES ES20025060 SODO-354/2020, z dne 22. 6. 2020.

»*Ključni pogoj za izvajanje storitev prožnosti je, da družba SODO d. o. o. v vlogi ODS, in pogodbeni partnerji pravočasno razpolagajo z vsemi potrebnimi merilnimi podatki. Družba*

SODO v vlogi ODS zagotovi enotni dostop do merilnih podatkov na enotni platformi in stalno povezavo s sistemskim operaterjem prenosnega omrežja (ELES) po prej dogovorjenem protokolu 24/7 vse dni v letu.

SODO mora zagotavljati sistemskemu operaterju ELES in vsem ostalim deležnikom (EDP, AGEN, Borzen, agregatorji, ...) nediskriminatoren dostop do podatkov. S stalnim in neposrednim dostopom do merilnih podatkov preko sistema za enotni dostop do podatkov na enotni platformi, se z nižjimi stroški zagotavlja transparentno upravljanje sistemov, ki bodo povezljivi, ekonomsko in tehnično sprejemljivi, z glavnim poudarkom na koristih uporabnikov elektroenergetskega sistema. Tudi zato je, na podlagi Uredbe o ukrepih in postopkih za uvedbo in povezljivost naprednih merilnih sistemov električne energije iz leta 2015 (Ur. l. RS 79/2015), družba SODO leta 2016 izdelala in objavila Načrt uvedbe naprednega merilnega sistema , na podlagi katerega je zadolžena, da vzpostavi centralni sistem za dostop do merilnih podatkov, ki je potreben za zagotovitev vseh ravni koristi naprednega merilnega sistema, ki bo zagotavljal storitve ter enake ravni informacij na nacionalnem nivoju in ne samo na ravni posameznega elektrodistribucijskega podjetja. Izzivi, ki jih prinaša digitalizacija na področje energetike, so obsežni. Zajemajo: prilagajanje odjema s strani aktivnega odjemalca, trg prožnosti – ustrezno odzivanje odjemalcev s svojim odjemom ali proizvodnjo električne energije, hranilnike električne energije, elektrifikacijo prometa in ogrevanja (električna vozila, toplotne črpalke), napovedovanje odjema in proizvodnje električne energije (skladno s 7. točko 2. odstavka 78. člena EZ-1, Ur. l. RS 60/19), izvajanje ukrepov učinkovite rabe energije in uvajanje naprednih tehnoloških rešitev, s katerimi bomo obvladovali dinamično dogajanje v distribucijskem sistemu. Za izvajanje teh nalog so osnova merilni podatki v vzpostavljenem centralnem sistemu distribucijskega operaterja za dostop do merilnih podatkov, ki bo zagotavljal informacije vsem deležnikom na nacionalnem nivoju, tako uporabnikom sistema, odjemalcem, kot dobaviteljem električne energije, sistemskemu operaterju ELES, operaterju trga z elektriko Borzen, Eko skladu, SURSu, elektrodistribucijskim podjem, tretjim osebam, ki izvajajo energetske storitve (agregatorji), Agenciji za energijo, idr., na enem mestu kot pogoj za nudenje storitev na enaki ravni, ne glede na območje distribucijskega sistema. Agencija za energijo je že v Analizi dolgoročnih stroškov in koristi uvedbe naprednega merilnega sistema predlagala vzpostavitev centralnega dostopa do merilnih podatkov v okviru družbe SODO oz. celo kot svoj pravni subjekt, nikakor pa ne v okviru elektrodistribucijskih podjetij. Da bi tako vzpostavljen centralni sistem za dostop do merilnih podatkov lahko pričel služiti namenu, je pogoj razpoložljivost merilnih podatkov iz vseh merilnih mest na elektrodistribucijskem sistemu v Sloveniji na enem mestu, to je v centralnem sistemu distribucijskega operaterja za dostop do merilnih podatkov. Družba SODO je že vzpostavila informacijsko podporo, ki omogoča prevzem vseh 15 minutnih merilnih podatkov v okviru dneva za pretekli dan iz vseh posameznih merilnih mest na elektrodistribucijskem sistemu v Sloveniji. Prav razpoložljivost in zanesljivih podatkov, bo v prihodnje ključnega pomena bodočih storitev za učinkovito rabo energije, ter obratovanje in načrtovanje distribucijskega sistema, v danem primeru pa podporo storitvam prožnosti.«

DODATEK B – kompleten odziv Koalicije evropskih agregatorjev DR4EU

Odziv DR4EU je bil podan v drugačni obliki in ga zato v celoti ni bilo mogoče umestiti v odgovore iz podanega vprašalnika. Iz tega razloga v nadaljevanju podajamo celoten odziv z vsemi komentarji.

SLOVENIA

Public consultation from on
demand response participation through aggregation

Contribution from

DR4EU

a pan-European aggregators' coalition

June 2020

Introduction

This response is provided by DR4EU, a pan-European coalition of companies operating demand response in more than 20 countries in Europe and beyond, whether as aggregators (independent or not) and/or solution providers to/with various partners.

Within DR4EU, the contact persons most involved in the discussion regarding Slovenia are

REDIGIRANO

Focus

This contribution focuses on the following issues described in the Consultation Document (CD):

- DR participation in electricity markets
- Measurement and verification
- Balance responsibility of aggregators
- Balance responsibility of suppliers and models
- Compensation paid to suppliers (if any)
- Undertakings to pay for the compensation and net benefit
- Detailed Q&A as per the consultation document

➢ **After an overview on DR participation in the markets, responses** are provided in **blue**

Background and references

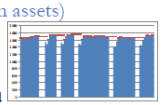
- CD stands for consultation document, i.e. the memo published by Slovenian Authorities
- CEP / Clean Energy Package
  - EMD: directive on electricity market design, (EU) 2019/944
  - ER: regulation on electricity markets, (EU) 2019/943
  - Both published on June 14th, 2019 in the OJUE
- MS stands for Member State in the EU
- DRP stands for Demand Response Provider, i.e. an entity offering demand response in the electricity system
  - Be it for instance by:
    - Bidding in the day ahead energy market; or as a BSP, i.e. providing balancing services to the TSO (e.g. FCR or mFRR)
    - Aggregating load changes triggered among a large number of consumers, then called a DR aggregator
    - An independent aggregator, as seen from the consumer, i.e. not linked to his electricity supplier; or by the supplier who would operate as a DRP, i.e. trigger consumption changes and sell DR as an aggregator would
  - In all cases, DRP commits to deliver (explicit) Demand Response as sold
    - Hence DRP should be or have a balance responsible party (BRP) as detailed hereafter
- DR refers to Demand Reduction in most cases, the main kind of demand response participation, although it could include also demand increase triggered to meet a system or market need

General principle: DR in all markets as an alternative to generation

- MS to allow and foster participation of DR in all markets without discrimination versus generation
- Indeed, **DR is an alternative to generation**: DR does not use electricity from generators, DR provides an alternative offered in the wholesale market and delivered by reducing consumption
  - Reducing consumption is a way not to need generation
  - Generation is avoided because DR is sold in the market instead
  - The more DR sold, the less generation
  - Selling DR is not selling energy from generators, it is an alternative
  - As highlighted by its Recital 39, the EMD is about trading flexibility, i.e. change in consumption, not trading energy generated.
  - ➢ **Note: there is no such thing as "*transfer of energy*" as suggested by the CD.**
    DR takes place after being sold instead of energy, hence energy is not generated and does not exist; energy that does not exist cannot be transferred and this cannot be the justification for any compensation; only costs may be (see *infra*).
- DR should be accepted in all markets
  - DR allowed to bid in day ahead and any wholesale electricity market (EMD 17-1) and also for ancillary services (EMD 17-2)
  - DR should "*participate alongside producers in a non-discriminatory manner*" as stated in the EMD
    - DR should be paid the same market price
    - Level playing field with generators (including similar balancing responsibility, see *infra*)

Measurement and verification: data and methodologies used must be, in any case, adapted to the kind of DR delivered

- Key principle is set in the CEP
  - DR volumes sold need be delivered, so as to ensure grid balance
  - Hence DRPs (be they independent aggregator or not) should be or have a BRP, responsible for any difference between sales and 'allocated volume' as clarified by recital 15 of the ER
  - For a DRP, the 'allocated volume' is the difference between a baseline and the actual consumption, and its calculation should be '***based on a defined measurement and baseline methodology***'
- ➢ How to establish such methodologies
  - ➢ Baseline methodology should be proposed by DRP in order to be adapted to the kind of DR operations and processes involved. Methodology should be approved by NRA, calculations performed by DRP, and verified by neutral third party
  - ➢ Measurement must also be adapted to DR various kinds of operations, consumers and services/markets. Hence it should be based on appropriate submetering by DRP, and verified by neutral third party
  - ➢ All under supervision and scrutiny by NRA
  - ➢ All defined, regarding ancillary services, in accordance with TSO needs (and not tailormade for generation assets)
- Examples
  - Residential and small C&I consumers
    - Better than smart meters: demand control and monitoring in real time provides appropriate, accurate and reliable data
    - Real-time individually determined baseline has proved effective: on each site, the baseline during short curtailment periods is defined as power measured just before ; such individual baselines are added to form the overall baseline, for all sites curtailed in turn, at aggregated level



  - Industrial consumers
    - Submeters are all the more useful for large consumer sites, and may be installed by aggregators
    - Historical or forecast-based baseline methodologies, or simple pre-curtailment reference, all may be used, provided they prove be reliable according to the kind of DR operated.

Balance responsibility of DRP/aggregators is clearly defined by CEP, similar to generators'

- DR is an alternative to traditional generation, because avoiding to consume makes it possible (and necessary) not to generate. Hence both DR and generation should bear the same balance responsibility
  - After generation is sold, it need be delivered to match consumption. If it fails to deliver the volumes sold, the missing difference will result in a grid physical imbalance. To avoid this, generator need to be or have a balance responsible party, i.e. an entity who will be financially responsible to pay on the basis of the undelivered volumes, called a 'negative imbalance'. This principle is set in article 5 of the ER and already in place EU-wide.
  - The same responsibility should be borne by DR. Indeed, after DR is sold, it need be delivered too, i.e. consumption should be reduced by the volume sold. Should there be a difference, it will result in a grid physical imbalance, exactly as generators. So that the DRP should bear similar balance responsibility: to deliver volumes sold.
- **The EMD provides for a clear definition of the balance responsibility of a DR aggregator** as stated under art.17-3-d, referring to art.5 in the ER, further clarified by its recital 15.
  - Balance responsibility of any market party is to match sales with 'allocated volume'.
  - For a generator, allocated volume is the number of MWh of production as assessed by a meter.
  - For an aggregator, allocated volume is, as per recital 15, the number of MWh of consumption that is avoided. It is assessed as the difference between a baseline (see infra) and the remaining actual consumption.
  - The responsibility for the remaining actual consumption should remain with the supplier (and his BRP).
  - ➢ **The aggregator should be financially responsible for (and only for) any difference between his allocated volumes, as actually delivered, and his sales**; the aggregator should **not** be responsible for anything else; exactly as a generator is.
- The CEP is very clear on the balance responsibility of aggregators, and leaves little room for MS if any, because this is critical to ensure that DR contributes to the grid balance, as an alternative to generation, on a level-playing field.

➢ We agree with the CD that only some 'models' comply with the CEP regarding the balance responsibility of suppliers (cf *infra*). For instance, the 'split model' does not comply with the CEP, because it would impose DR and supply be linked

- Sharing individual access point would mean that the aggregator would substitute the supplier for a given part of the consumption, e.g. an e-vehicle charging. It would make it mandatory that the aggregator need become a supplier for such part.
- This would not solve the real issue to balance the grid, hence to match DR sales with actual demand reduction (i.e. the volumes of consumption curtailed, not the remaining volumes)
- This "split-supply" would not comply with art.13 of the EMD whereby the consumer should be free to choose any aggregator '*independently from their electricity supply contract*'. Hence it need to be possible to operate DR on loads without supplying electricity.

Balance responsibility of suppliers and possible variation on models

- While the CEP defines precisely how to calculate the balance sheet of aggregator as described *supra*, some flexibility is left to MS, regarding the model to account for DR in the balance sheets of electricity suppliers.
- As clarified by Recital 39 of the EMD, MS may introduce a 'perimeter correction', so that two models are possible, whether such correction is used or not, with slightly different impacts on the suppliers' BRP of participating consumers:
  1. Without 'correction', as per existing rules, such supplier will, in case of a DR event, be accounted for a **positive** imbalance, and be paid accordingly by the TSO at positive imbalance price. This is similar to what happens when a supplier is 'long' and there is no cost for the BRP, rather a revenue.
     Besides, when DR occurs, it is likely that the system would tend to be 'short', so that the positive imbalance price is even better than the spot price. Therefore, the BRP is happy and can pass this benefit to the supplier, as they use to do according to their bilateral contract.
     Hence, with this model, no compensation need be paid to the BRP/supplier. Here, it should be emphasized that a compensation is possible according to the directive only for the suppliers/BRPs that are directly affected by DR activation, and only for the costs they incur during DR activation. With an uncorrected model, there is no such cost, so that suppliers and their BRPs should not receive any 'compensation'.
  2. With a 'correction', the supplier's BRP is deprived from his positive imbalance, and will not receive the related payment from the TSO(*). Indeed, the 'correction' means the TSO will modify the balance sheet of the suppliers' BRPs, so that the consumption of their customers will be changed and considered as higher than it really is. With such model deviating from reality, the suppliers' BRPs will be deprived from their positive imbalance, and will not receive the related payment from the TSO. Hence, to be fair, when the TSO will thus 'correct' (i.e. modify) the balance sheet of a BRP, the TSO should simultaneously compensate the BRP for this correction.
- Both models end up being somehow similar: suppliers and their BRPs are fairly treated and happy, as they have been compensated by the TSO, either for their positive imbalance, or for the correction imposed.
- The slight differences are: the uncorrected model is simpler, because there is no need to change the current definition of the balance responsibility of suppliers, nor to create new financial flows. However, it may be argued that suppliers/BRPs are overcompensated, at a (high) positive imbalance price, while spot price would be sufficient – hence the corrected model may be preferred at least when volumes grow.

➢ The uncorrected model should be preferred as long as financial amounts remain small, i.e. as long as DR volumes are relatively small, or as soon as they are evenly spread among consumers (and therefore among suppliers/BRPs).

** It is sometimes suggested that the consumer should then pay on the basis of the 'corrected' curve, but this is very complex and radically unfair, since he did not consume that volume, which was not generated either.*

The 'compensation' issue (1/2): Acceptable *versus* undue justifications

- According to the EMD, a compensation to suppliers/BRPS may be implemented by MS under strict conditions set forth in art.17-4.
  - In particular, compensation may be paid only to those suppliers (or their BRPs) which are directly affected by DR, and only up to the cost they incur during DR activation.
  - With a corrected model, it may be argued that the 'correction' imposed on the suppliers' BRPs is a cost for them, thus justifying paying them a compensation based on this correction.
- Hence, in no case does the EMD leave any possibility to justify any compensation:
  - 'for the balance sheet errors to the electricity retailers', at least not as long as there is no cost for them, such as with the uncorrected model.
  - 'related to a transfer of energy (ToE)' as considered by the CD: indeed, there is no basis for such compensation because there is no such energy: it is not generated, and therefore it cannot be transferred. DR is not about selling energy, but avoiding energy (generation and use). This is why the EMD has ruled out any of the old justifications based on the idea that 'an independent aggregator can be interpreted as selling third-party energy'. Mentioning a 'transfer of energy' is not relevant any longer regarding DR, which should be traded as such, and not as a by product, as per any such obsolete interpretation.
- The EMD set clear principles to ensure (as clarified by recital 39) that '*all customers should have access to electricity markets to trade their flexibility*', not to re-sell energy: the EMD allows DR to be traded, as such, as an alternative to generation, without any discrimination. For sure, charging a compensation to DR and not to generation would be a radical discrimination so that interpreting DR as if IA would be selling third party energy is now impossible in the EU. (It has also been ruled out in the US, as backed by the Supreme Court, as well as in several countries in Asia).

The 'compensation' issue (2/2): How to comply with the EMD

- Should Slovenia wish a 'compensation' be paid to suppliers, the conditions set forth by the EMD should be carefully met.
- To achieve this, the key innovation embedded in the EMD is to separate two different issues:
  1. Whether a compensation should be paid to suppliers or their BRPs? This is a possibility left to MS, provided the compensation is limited to those parties *directly* affected and to their *direct* costs during DR activation.
  2. Who should pay the compensation?
     - MS may require any 'electricity undertaking' to pay, not only nor even specifically DR aggregators.
     - On the contrary, the EMD imposes that any compensation scheme *'shall not create a barrier to market entry of DR'*.
     - To ensure it does not create unlawful barriers, hence to share the burden, the EMD sets forth a simple principle: the net benefit rule.
- Charging 'compensation' costs to DR only, would obviously create a barrier to market entry
  - As showed *supra*, in a corrected model, suppliers/BRPs are likely to claim a compensation at spot price for correction volume.
  - It would not be possible to justify that the compensation price should be reduced over time due to better forecasting experience: the correction cost does not depend on forecasts, and would remain around spot price.
  - The obligation to pay spot price for each volume sold in the wholesale market (at spot price!) is a barrier excluding DR (and a radical discrimination versus generation).

➢ **The only solution left by the EMD for MS who wish to set a 'compensation' to their suppliers is to share the burden of this compensation among market parties**, i.e. basically :

- ➢ TSO to charge all suppliers because all benefit from reduced sourcing costs thanks to DR (hence pro rata their market share)
- ➢ not to charge DR, or only in exceptional circumstances, as described in art.17-4 establishing the net benefit rule.

The economics behind the net benefit rule: how to ensure that DR always benefits all consumers

- As soon as DR is allowed to bid in the wholesale markets, DR will be selected, and sold, only when cheaper than alternative bids, so that:
  - Less generation will be sold: DR bids will be chosen instead
  - Market will settle at lower prices.
- For suppliers, economic consequences are two-fold:
  - Benefits: they will save money from buying cheaper in the market, and this will ultimately benefit consumers.
  - Costs: they will buy DR volumes they cannot bill to consumers (as opposed to MWh-s from generation, which are consumed)
- At this stage, the analysis is simple: as long as benefits are greater than costs, DR results in a net benefit for suppliers overall, so that there is no reason DR should pay any compensation to suppliers, because this would mean overcompensating them.
  Because numbers show that benefits are indeed due to be many times greater than cost (cf various market studies worldwide already), DR should not contribute to any compensation to suppliers – only if ever benefits would in rare cases, not exceed costs.
  However, a compensation may be defined *among* suppliers, in order to share benefits and costs evenly *among* all suppliers, and ultimately *among* their customers, i.e. all consumers.
- Benefits are spontaneously shared via the market, because all suppliers will buy cheaper thanks to DR.
- Costs may not be evenly spread, and this depends on the market model used for balance sheets.
- Indeed, when DR volumes will be sold in the market and bought by suppliers, these volumes will be accounted for as inputs in their balance sheets, just as any MWh purchased. This will end up creating an 'accounting imbalance' for those suppliers with consumers reducing their load, i.e. a positive imbalance (note: it is an accounting imbalance, not a physical imbalance of the grid).
- Should Slovenia use an 'uncorrected model', this positive imbalance will owe them a payment from the TSO, so that BRPs/suppliers are fine without any specific 'compensation' for DR.
- Should Slovenia use a 'corrected model', the positive imbalance will be cancelled by the correction, so the BRPs should receive from the TSO a compensation for this correction he would impose them (and no payment by consumers for energy neither used nor generated).
- Ultimately, the TSO will end up charging his costs either (in the uncorrected model) to BRPs, or (in the corrected model) to market parties. And in the end, these will in turn finally transfer these costs to consumers, together with benefits- henee the net benefits.

➢ To sum up: DR will benefit suppliers, but in some cases there will be a cost for the TSO. And ultimately both will be transferred to the consumers. Hence DR will ensure a net benefit to all consumers provided benefits are greater than costs. In the event costs would exceed benefits, the EMD allows to charge the difference to DR. Hence **the EMD ensures that DR will always benefit all consumers**.

Practical solutions for a 'compensation' mechanism

- DR should be accepted in all electricity markets, including both wholesale day ahead markets, and ancillary services, and the following principles should apply consistently throughout all markets
- At first, no new mechanism is needed:
  - Balance responsibility of DRPs is similar to generators'
  - Balance responsibility of suppliers remains unchanged ('uncorrected model')
  - No specific calculation or 'compensation' is needed
- If and when DR volumes grow and reach a given threshold so that they become significant, say over 3% or 5% of total market volumes (in MWh)
  - Implementation of a corrected model may be considered, without or with a compensation scheme
  - If DR is evenly spread among consumers and suppliers/BRPs, no new mechanism is needed
  - Otherwise, a cost/benefit analysis should be run
    - On the one side, the benefits of DR for all suppliers and consumers should be assessed, confirming the opportunity to let DR grow further
    - On the other side, the cost of implementing a specific compensation scheme should be assessed, and compared to the uneven sharing of net benefits resulting from DR among all suppliers.
  - Then, if appropriate, the compensation mechanism should be implemented with a view to share fairly the net benefits induced by DR among all suppliers, hence all consumers
  - These benefits should be assessed regularly, e.g. yearly, to confirm DR remains beneficial to all consumers

Q&A: #8&9 **Model dobave** [Model for supply]

8. Kako naj se omogočijo uporabniku vse pravice do izbire in sklepanja pogodb, ki so zahtevane z zakonodajo EU (npr. pravica sklenitve več odprtih pogodb z dobavitelji/ agregatorji na istem priključku)?
☐Z implementacijo modela "split-supply";
☐Z drugo ustrezno rešitvijo (prosimo, pojasnite predlog rešitve):
8. How should the user be given all the rights to choose and conclude contracts required by EU law (eg the right to conclude several open contracts with suppliers / aggregators on the same connection)?
☐With the implementation of the "split-supply" model;
☐With another appropriate solution (please explain the proposed solution):

9. Ne glede na prejšnji odgovor, kakšno je vaše mnenje glede modela »split-supply«? Navedite prednosti, slabosti, pomisleke, predloge.
9. Regardless of the previous answer, what is your opinion on the split-supply model? State the strengths, weaknesses, concerns, suggestions.

The 'split-supply' is not a solution as per EU legislation.

- It does not allow an independent aggregator to operate DR (i.e. an aggregator that does not supply electricity to the consumer). Therefore it does not comply with art17-3 (a) of the EMD.
- it does not ensure that DR and supply contracts are independent. Therefore it does not comply either with art 13-1, whereby consumers should be able to conclude a DR contract "*independently from their electricity supply contract*".

The appropriate solution derives from a clear balance responsibility for each kind of actor, as per recital 15 of the ER

- ✓ DR aggregator is responsible for matching his sales with the change he triggers in participating consumers' load, calculated as the difference between a baseline and the actual consumption. This '*allocated volume*' is used to calculate his imbalance by comparing it to his '*final position in the market*' (i.e. net sales). Thus his responsibility is clear.
- ✓ Supplier is responsible for the remainder, i.e. the actual consumption (corrected or not, cf infra the discussion on suppliers' models). The supplier should simply match this consumption volume with his purchases in the market.
- ➢ So they have very different responsibilities, clearly separate, even if involving same consumers.
- This is not related to any 'split-supply' model, that would in fact bind DR and supply, and infringe the EMD.

Q&A: #10 & 11 (1/2)
Model neodvisnega agregatorja [Independent aggregator model]

10. Za spodnje modele neodvisnega agregatorja (NA) prosimo navedite, kako vi vidite prednosti, slabosti ter postopek izvajanja v praksi:
10. For the following models of the independent aggregator (IA), please indicate how you see the advantages, disadvantages and the implementation process in practice:
MODEL ADVANTAGES WEAKNESSES IMPLEMENTATION IN PRACTICE
Existing / Intervention-free model/Corrective/Compensatory

MODEL	PREDNOSTI	SLABOSTI	IZVAJANJE V PRAKSI
Obstoječi			
Model brez posegov			
Korekcijski			
Kompenzacijski			

11. Kateri model agregatorja je po vašem mnenju najustreznejši za Slovenijo? Prosimo, utemeljite.
☐Obstoječi; ☐Model brez posegov; ☐Korekcijski; ☐Kompenzacijski; ☐"Split-supply" (akter mora integrirati vloji dobavitelja in agregatorja); ☐Drugi – navedite:
11. In your opinion, which aggregator model is the most suitable for Slovenia? Please justify. ☐Existing; ☐ GovModel without interventions; ☐Correctional; ☐Compensatory; ☐ "Split-supply" (the actor must integrate the roles of supplier and aggregator); ☐Other - specify:

The CEP does not leave much space, if any, for MS to define their model regarding the balance responsibility of aggregators, as was described supra, due to article 17-3 (d) of the EMD combined with recital 15 of the ER.

The CEP leaves more flexibility for MS to choose models for the balance responsibility of suppliers (cf EMD recital 39).

- MS may choose an 'uncorrected model', whereby, when DR occurs, the supplier of participating consumers will have a *positive* imbalance, so that he will be paid by the settlement entity (say the TSO).
- MS are also allowed to use a 'corrected model', whereby the 'perimeter' of the supplier is 'corrected', by adding the curtailed consumption (=DR volume) to the actual consumption of his customers. Then the supplier is deprived of his positive imbalance and related revenue, and he should be entitled to receive a compensation for this correction by the settlement entity (say the TSO).
- In both cases, MS may choose (as per art.17-4) to implement a compensation payment mechanism, so that market parties contribute to pay the TSO (who, in turn, pays the supplier or participating consumers). However, this should not create a barrier to DR. Therefore, the burden must be shared. As per the net benefit rule set forth in art.17-4, the solution is to share the burden among all suppliers because they all benefit from DR reducing their sourcing costs, so they should bear costs pro rata their market shares, so as to share net benefits. DR shall be charged only when and to the extent that costs would exceed benefits.

(to be continued on next page)

Q&A: #10 & 11 (2/2)
Model neodvisnega agregatorja [Independent aggregator model]

In practice

- Slovenia could open all markets based on a model without correction nor compensation mechanism, because this is the simplest approach.
- If and when DR volumes grow, then a corrected model could be implemented. However this is more complex, so that it is not necessary to start with. The correction should entitle the supplier to receive a compensation for this correction from the TSO, at spot price.
- Besides, when DR volumes grow, the TSO may be allowed to charge a compensation to all suppliers, pro rata their market shares, so that the TSO can pay the impacted suppliers, be it:
  - In an uncorrected model: for their positive imbalance
  - In a corrected model: TSO pays suppliers a compensation for the correction.

  Such cost sharing mechanism ensures that costs are fairly shared among suppliers, who all benefit from reduced sourcing costs in the market, pro rata their market share.
  However, such compensation and cost sharing mechanism will not be necessary if DR develops among all consumers, so that DR volumes are evenly shared among suppliers, therefore suppliers would automatically share both benefits and costs in a fair way, so that DR will ultimately ensure net benefits to all consumers. If DR is not evenly spread among suppliers, then the cost sharing mechanism should be implemented. Besides, this mechanism ensures all suppliers who want to become aggregators can operate DR from their customers on a level playing field with independent aggregators.
- Finally, as DR volumes grow, benefits of DR (as defined by art.17-4) should be regularly assessed and published. If ever benefits would not exceed price of DR, then DR may also be charged to offset the difference, so that, in any case, DR will always provide net benefits to all suppliers, and all consumers.

Q&A: #12 **Učinek »odboja«** ["Bounce" effect]

12. *Kakšno je vaše mnenje glede učinka odboja (MM kompenzira aktivacijo v drugem časovnem obdobju)? Če menite, da je pomemben, kako bi ga sistemsko uredili? Prost odgovor:*
12. What is your opinion about the effect of reflection (MM – measuring point / consumer compensates for activation in the second time period)? If you think it is important, how would you arrange it systematically? Free answer:

Depending on the kind of DR and how it is operated, load may be reduced or only (partially) shifted to a later period. However, the impact on suppliers is really small, because during this rebound, the shifted load will be paid by consumers, and suppliers will learn how to forecast this when volumes grow, so that there is basically no impact on imbalances then that would not be foreseen as consumption usually is.

Accordingly, it should be emphasized that rebound cannot be included in the calculation of the compensation mechanism set forth in art.17-4, which relates only to costs incurred by suppliers **during the activation of demand response.**

Q&A: #13&14 **Kompenzacija** [Compensation]

13. *Ne glede na vaše mnenje glede kompenzacijskega modela: kako naj bi po vašem mnenju uredili vprašanje kompenzacije, upoštevajoč določbo 17(4) Direktive 2019/944, oziroma kdo bi moral nositi stroške?*
☐Po regulirani ceni, a izključno med DOB in NA;
☐Po regulirani ceni, vendar bi bili lahko zajeti tudi drugi subjekti – pojasnite:
13. Irrespective of your opinion on the compensation model: how do you think the issue of compensation should be regulated, taking into account the provision 17 (4) of Directive 2019/944, or who should bear the costs?
☐ At a regulated price, but exclusively between DOB (supplier) and NA (independent aggregator);
☐ At a regulated price, but other entities could also be covered - explain:
14. Ali imate predlog, kako bi določili model take kompenzacijske cene? Prost odgovor:
14. Do you have a proposal on how to determine the model of such a compensatory price? Free answer:

The key principle to implement any compensation mechanism is to decide in two steps :
- Who should receive what
- Who should pay

According to art.17-4, MS may ensure a compensation is paid by various market parties to the suppliers impacted by DR.

However, this should not create a barrier to DR nor aggregators, so that the cost should be shared, not charged to DR. The calculation methodology set forth under the net benefit rule ensures that DR is charged only if and to the extent it would benefit suppliers less than it would cost them.

The costs that can be taken into account and compensated are limited in the article to direct costs incurred during the activation of DR.

Rather than a regulated price, the spot price could be used, i.e. the price in the day ahead wholesale market for this period, or some kind of average, provided the formula to calculate this average would be justified and published. This average could reflect the cost of DR for suppliers, which is the cost of buying DR volumes which are not generated electricity, hence not consumed nor billed to consumers.

Q&A: #15&16
Metodologija »baseline« ["Baseline" methodology]

15. *Kateri kriteriji morajo biti upoštevani pri definiranju metodologije za določitev »baseline« (možnih je več odgovorov):*
☐*Natančnost;*
☐*Preprostost;*
☐*Celovitost;*
☐*Drugo – prosimo opredelite in utemeljite:*
15. What criteria must be taken into account when defining the methodology for determining the "baseline" (several answers are possible):
☐Accuracy; ☐ Simplicity; ☐Integrity; ☐Other - please specify and justify:

https://library.cee1.org/sites/default/files/library/10774/CEE_EvalDRBaseline_2011.pdf

The key criteria to select any baseline methodology is to make it reliable and predictable during operations, so that the DR aggregator can ensure in real time he meets his commitments and delivers the exact volume.

For instance, an aggregator should be allowed to use data from his own meters or submeters, if he wishes to, in order to deliver DR volumes with maximum accuracy and reliability.
Conversely, imposing to use data from TSO&DSO meters that would not be available in real time may result in poor accuracy.

16. *Od česa naj bo odvisna določitev metodologije "baseline"?*
☐*Od produkta prožnosti;*
☐*Od modela agregatorja;*
☐*Od produkta prožnosti in modela agregatorja;*
☐*Od produkta prožnosti, načina aktivacije in modela agregatorja;*
☐*Obstajati mora ena sama metodologija "baseline";*
☐*Drugo – navedite:*
16. What should the determination of the baseline methodology depend on? ☐ From the product of flexibility; ☐ From the aggregator model; ☐ From the flexibility product and the aggregator model; ☐ From the product of flexibility, the method of activation and the model of the aggregator; ☐ There must be a single "baseline" methodology; ☐Other - specify:

The baseline methodology should depend on the kind of DR delivered: i.e. the kind of product, and also of loads and consumers. For instance, for residential consumers, and small commercial, a real-time individually determined baseline is appropriate, i.e. considering that each site would have remained using the same power if it had not been briefly curtailed.

No single baseline should be enforced. Any baseline methodology should be proposed by the aggregator and authorised by the NRA (or by the settlement entity, under supervision of the NRA).

Q&A: #17 & 18
Metodologija »baseline« ["Baseline" methodology]

17. *Na katerih ravneh naj bodo določeni kriteriji za določitev metodologije "baseline"? Utemeljite svojo izbiro (zakaj menite, da je določena ureditev potrebna oziroma ni potrebna).*
■Izključno na ravni agregiranega portfelja MM, ostalo je dogovorno;
☐Na ravni agregiranega portfelja MM in posameznih MM;
☐Kriterijev ni treba določiti, "baseline" naj se definira dogovorno;
☐Drugo – navedite:
17. At what levels should the criteria for determining the baseline methodology be set? Justify your choice (why do you think a certain arrangement is necessary or not necessary).
☐Exclusively at the level of the aggregated MM portfolio, the rest is agreed;
☐At the level of the aggregate portfolio of MM and individual MM;
☐The criteria do not need to be defined, the "baseline" should be defined by agreement;
☐Other - specify:

The baseline may be determined using individual metering data and/or forecasts, but it should be used (and assessed as reliable and accurate or not) only at aggregated level.

18. *Kako naj se metodologija regulira oziroma kontrolira?*
☐To ni potrebno oziroma pomembno;
☐Metodologijo (enotno) izda oziroma potrdi regulator;
■ Metodologije (več možnih) potrdi regulator;
☐Sama metodologija ni pomembna, pomembni so končni rezultati (pravilnost napovedi); Komentar (izbirno):
18. How should the methodology be regulated or controlled?
☐This is not necessary or important;
☐Methodology (uniformly) is issued or approved by the regulator;
☐Methodologies (several possible) are approved by the regulator;
☐The methodology itself is not important, the final results are important (correctness of the forecast); Comment (optional)

Any baseline methodology should be proposed by an aggregator and approved by the NRA (or, under the supervision of the NRA, by the settlement entity as per published rules approved by the NRA).

Q&A: #19 & 20
Metodologija »baseline« ["Baseline" methodology]

19. Med zaključki dela Rossetto, N. je mogoče zaslediti naslednja priporočila za določitev »baseline« na podlagi izkušenj iz ZDA:
a) Za energijske produkte je smiselno uporabiti oceno na podlagi zgodovine odjema v dnevih, ki jim neposredno sledi aktivacija.
b) Nasprotno, pa je za sistemske storitve na podlagi aktivnega odjema bolje pogledati razliko med odjemom neposredno pred aktivacijo in odjemom neposredno po aktivaciji.
c) Za produkte povezane z zmogljivostjo, se »baseline« lahko določi iz največje stopnje odjema zabeležene v predhodnem letu s strani ponudnika storitve, ki se pojavi istočasno kot največji odjem celotnega elektroenergetskega sistema.
Nadalje, priporočila glede določitve »baseline« je podal tudi USEF in sicer na ravni posameznih produktov in modelov.
Kakšno je vaše mnenje glede podanih predlogov in posameznih sklopov produktov/storitev?

- *Rossetto, N. (2018), 'Measuring the intangible: an overview of the methodologies for calculating customer baseline load in PJM', FSR Policy Brief 2018/05 (http://hdl.handle.net/1814/54744)*
- *https://www.usef.energy/app/uploads/2017/09/Recommended-practices-for-DR-market-design-2.pdf (Poglavje 6.2)*

19. In the conclusions of N. Rossetto's work, the following recommendations for a 'baseline' can be made, based on experience in the United States:
a) For energy products, it makes sense to use an estimate based on the history of consumption in the days immediately followed by activation.
b) Conversely, for active consumption-based ancillary services, it is better to look at the difference between consumption immediately before activation and consumption immediately after activation.
c) For capacity-related products, the "baseline" can be determined from the maximum consumption rate recorded in the previous year by the service provider, which occurs at the same time as the maximum consumption of the entire electricity system.
Furthermore, recommendations on the definition of "baseline" were also given by USEF at the level of individual products and models.
What is your opinion about the given proposals and individual sets of products / services? Free answer:

Unfortunately, the American study did not take into consideration the EU market design and products, so that it cannot be used.
The USEF report was an early analysis, and most of it does not comply with the CEP any more. Besides, it failed to encompass residential sector properly. And it was inspired mainly by utilities with little experience if any in DR participation.
Our recommendations are based on a wide experience in various countries (and comply with the CEP). For instance, after several years using data from T&DSO meters, France recently moved to using submetering data provided the aggregator, to improve accuracy and reliability.

20. Ali morda na podlagi vseh informacij lahko opredelite najustreznejše metodologije za določitev »baseline« (na ravni produktov/modelov ali splošno)? Prosimo vključite utemeljitev. Prost odgovor:
20. Based on all the information, can you perhaps identify the most appropriate methodologies for determining the "baseline" (at product / model level or in general)? Please include a justification. Free answer:

Baseline methodology depends on the kind of DR operated (market/product, flexibility resources, operation mode).
Rules should define how an aggregator can propose an appropriate methodology, how this will be assessed (criteria and required efficacy) and approved.

Q&A: #21-25
Vzpostavitev registra prožnosti [Establishment of a flexibility register]

21. Register prožnosti se kaže kot učinkovita rešitev pri izvajanju storitev prožnosti na integriranih ali povezanih trgih in intenzivni koordinaciji OPS, ODS in OT.
a. Ali menite, da je vzpostavitev Registra prožnosti potrebna oziroma smiselna za učinkovito izvajanje procesov trgovanja s prožnostjo?
☐ DA;
■ NE;
☐ Ne vem;
Komentar (izbirno):

12. Flexibility register seems like a usefull solution for flexibility management on integrated markets and intensive coordination among TSO, DSO and Market Operator.
a) Do you think establishment of flexibility register is needed for efficient flexibility trading:
☐ Yes; ☐ No; ☐ I don't know;
Comment:

Q&A: #26 & 27

Vzpostavitev registra prožnosti [Establishment of a flexibility register]

26. Kako naj bi po vašem mnenju potekalo obveščanje glede storitev prožnosti? Razmislite tako o vzpostavitvi storitve na posameznem MM kot tudi o izvajanju storitev (»aktivacije prožnosti«).
Prost odgovor:
26. How do you think communication on flexibility services should take place? Consider both setting up a service on an individual MM as well as performing services ("flexibility activation").
Free answer: Only realized DR curtailment at potfolio level (aggregated, not at MM).

27. Če ste, ali boste predvidoma v prihodnje v vlogi agregatorja – kaj menite glede možnosti posredovanja naslednjih podatkov?
27. If so, are you expected to act as an aggregator in the future - what do you think about the possibility of providing the following information?

DATA FEASIBILITY COMMENTARY

Daily - activations at the level of MM
☐YES;
☐NO;
☐PARTIALLY;

Daily - realizations at the level of MM
☐YES;
☐NO;
☐PARTIALLY;

Daily - activations aggregated by AGE
☐YES;
☐NO;
☐PARTIALLY;

Daily - realizations aggregated by AGE
☐YES;
☐NO;
☐PARTIALLY;

PODATKI	IZVEDLJIVOST	KOMENTAR
Dnevno – aktivacije na nivoju MM	☐DA; ■NE; ☐DELNO;	
Dnevno – realizacije na nivoju MM	☐DA; ■NE; ☐DELNO;	
Dnevno – aktivacije agregirano po DOB	☐DA; ■NE; ☐DELNO;	
Dnevno – realizacije agregirano po DOB	■DA; ☐NE; ☐DELNO;	The information should be made available: - by the aggregator to the settlement entity at aggregated level (and details only when compliance check needed). - to other market parties, only at nationally-aggregated level (not per aggregator), and only if several aggregators operate (so as to protect commercially sensitive information)

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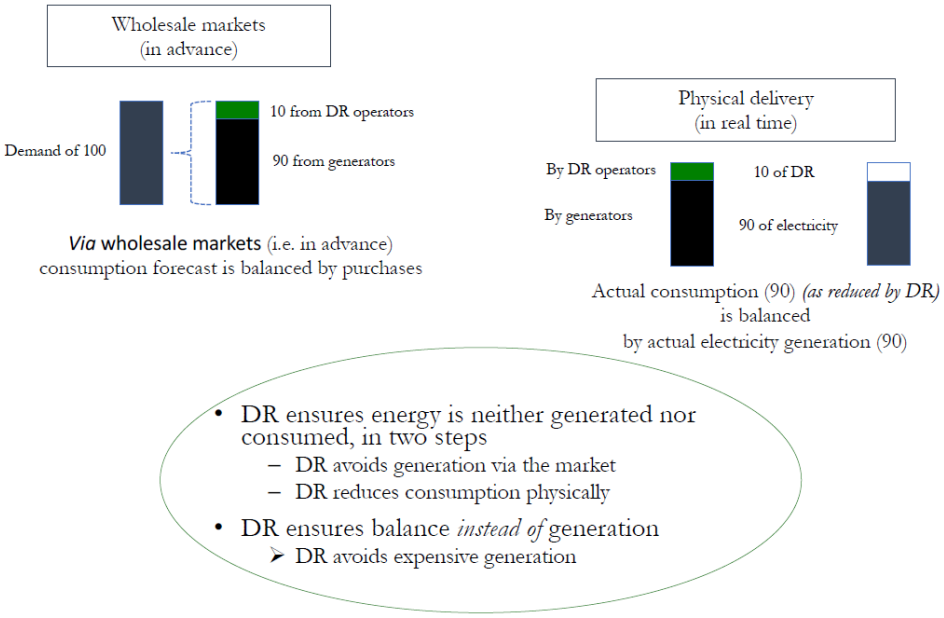
Appendix 1

Diagrams describing DR participation in all markets and the net benefit principle

DR in the wholesale markets



- DR ensures energy is neither generated nor consumed, in two steps
  - DR avoids generation via the market
  - DR reduces consumption physically
- DR ensures balance *instead of* generation
  - ➢ DR avoids expensive generation

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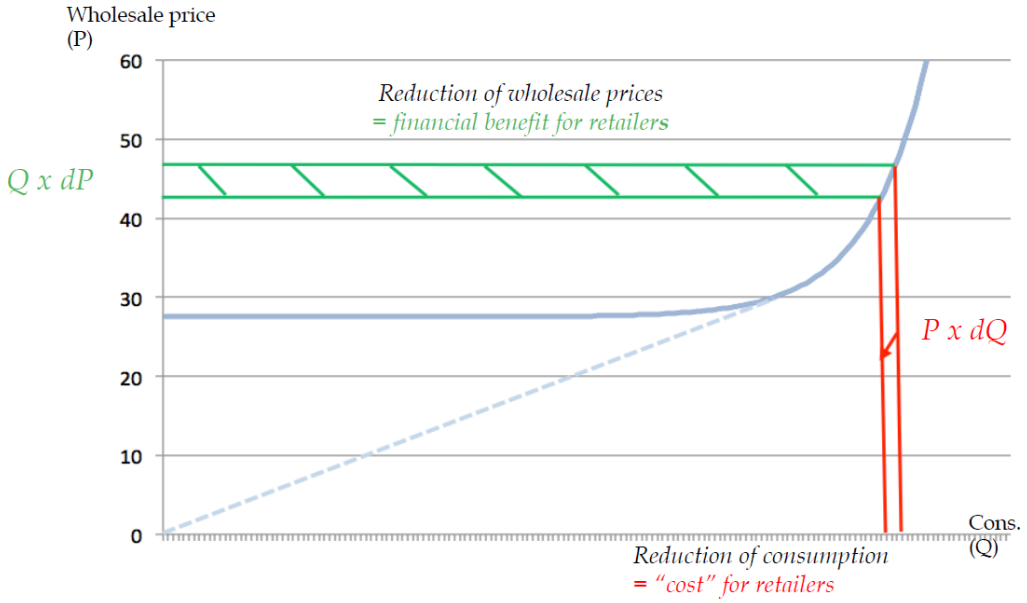
Selling DR on Energy Markets to Avoid High Prices



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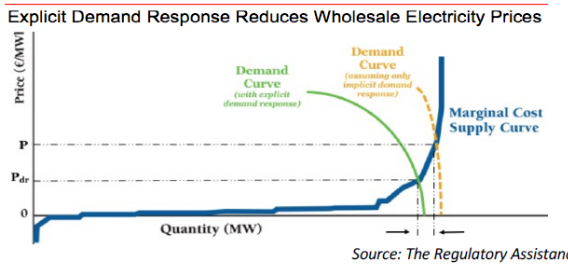
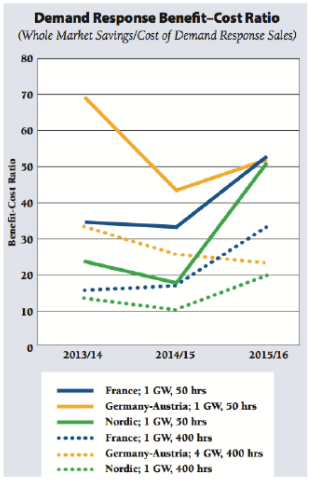
DR in European electricity markets
Benefit / Cost Ratio >> 10



Source: The Regulatory Assistance Project

	Market	Year	Average decrease in spot price on application of DR (€/MWh)	Whole market retailer benefit [M€]	Compensation payment to retailers (based on French compensation model) [M€]	DR sales [M€]	Retailer market benefit/ (Cost = DR sales)
400h/1GW	FRA	2013/14	13.01	379.27	28.06	24.68	15.37
		2014/15	11.81	344.57	27.93	20.77	16.59
		2015/16	18.99	515.54	21.42	15.72	32.80
	GER-AUT	2013/14	20	635.83	24.44	19.13	33.24
		2014/15	13.83	458.89	22.66	17.9	25.64
		2015/16	11.29	355.13	18.4	15.58	22.79
	NORDIC	2013/14	7.71	186.32	19.69	14.26	13.07
		2014/15	5.49	135.12	18.08	13.47	10.03
		2015/16	10.21	272.75	14.75	13.98	19.51



Benefits from market-based DR: reduce sourcing costs for retailers

450 GWh/mkt = 1.6 G€/y benefits for retailers

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Benefits at the heart of the new market design
Consumers' voice paved the way

BEUC The Europe Consumer Organisation

ELECTRICITY AGGREGATORS:

STARTING OFF ON THE RIGHT FOOT WITH CONSUMERS

- Consumers should not bear the cost of payments/compensation between suppliers and independent aggregators. If the need for such payments is verified, these should be financed by all market participants benefiting due to the trade of flexibility in the wholesale market.

➢ Compromise found in new Directive (EMD)

- Member States may implement a compensation paid to retailers of curtailed consumers
- Clear distinction between compensation *to* suppliers versus who pays it
- Compensation should not be a barrier to DR => share among various parties
- How to share taking account of benefits
  - compensation paid by those who benefit directly, i.e. all retailers
  - … also by DR subject to the **net benefit principle**

Only when and to the extent that benefits to retailers would not exceed costs for retailers

=> Net benefit for all retailers, to be ultimately transferred to all consumers

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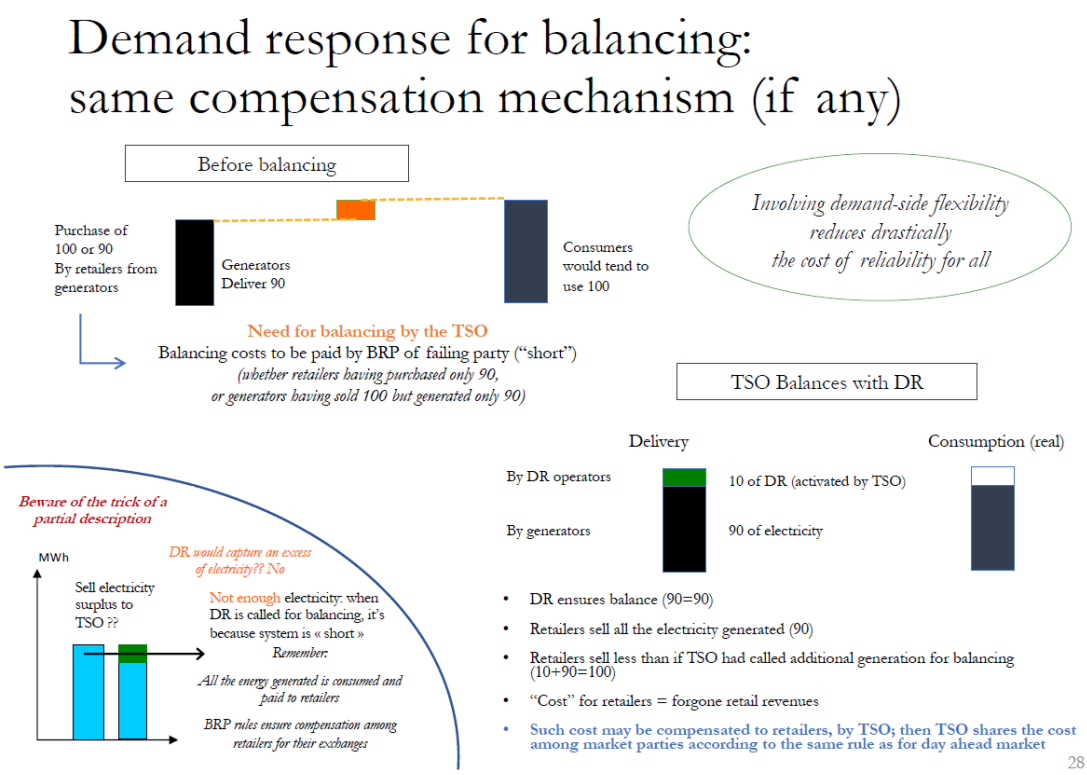

Appendix 2

Key provisions on DR from the CEP

Article 17

Demand response through aggregation

1. Member States shall allow and foster participation of demand response through aggregation. Member States shall allow final customers, including those offering demand response through aggregation, to participate alongside producers in a non-discriminatory manner in all electricity markets.

2. Member States shall ensure that transmission system operators and distribution system operators, when procuring ancillary services, treat market participants engaged in the aggregation of demand response in a non-discriminatory manner alongside producers on the basis of their technical capabilities.

3. Member States shall ensure that their relevant regulatory framework contains at least the following elements:

(a) the right for each market participant engaged in aggregation, including independent aggregators, to enter electricity markets without the consent of other market participants;

(b) non-discriminatory and transparent rules that clearly assign roles and responsibilities to all electricity undertakings and customers;

(c) non-discriminatory and transparent rules and procedures for the exchange of data between market participants engaged in aggregation and other electricity undertakings that ensure easy access to data on equal and non-discriminatory terms while fully protecting commercially sensitive information and customers' personal data;

(d) an obligation on market participants engaged in aggregation to be financially responsible for the imbalances that they cause in the electricity system; to that extent they shall be balance responsible parties or shall delegate their balancing responsibility in accordance with Article 5 of Regulation (EU) 2019/943;

(e) provision for final customers who have a contract with independent aggregators not to be subject to undue payments, penalties or other undue contractual restrictions by their suppliers;

(f) a conflict resolution mechanism between market participants engaged in aggregation and other market participants, including responsibility for imbalances.

4. Member States may require electricity undertakings or participating final customers to pay financial compensation to other market participants or to the market participants' balance responsible parties, if those market participants or balance responsible parties are directly affected by demand response activation. Such financial compensation shall not create a barrier to market entry for market participants engaged in aggregation or a barrier to flexibility. In such cases, the financial compensation shall be strictly limited to covering the resulting costs incurred by the suppliers of participating customers or the suppliers' balance responsible parties during the activation of demand response. The method for calculating compensation may take account of the benefits brought about by the independent aggregators to other market participants and, where it does so, the aggregators or participating customers may be required to contribute to such compensation but only where and to the extent that the benefits to all suppliers, customers and their balance responsible parties do not exceed the direct costs incurred. The calculation method shall be subject to approval by the regulatory authority or by another competent national authority.

5. Member States shall ensure that regulatory authorities or, where their national legal system so requires, transmission system operators and distribution system operators, acting in close cooperation with market participants and final customers, establish the technical requirements for participation of demand response in all electricity markets on the basis of the technical characteristics of those markets and the capabilities of demand response. Such requirements shall cover participation involving aggregated loads.

Recital 39 in the Directive

(39) All customer groups (industrial, commercial and households) should have access to the electricity markets to trade their flexibility and self-generated electricity. Customers should be allowed to make full use of the advantages of aggregation of production and supply over larger regions and benefit from cross-border competition. Market participants engaged in aggregation are likely to play an important role as intermediaries between customer groups and the market. Member States should be free to choose the appropriate implementation model and approach to governance for independent aggregation while respecting the general principles set out in this Directive. Such a model or approach could include choosing market-based or regulatory principles which provide solutions to comply with this Directive, such as models where imbalances are settled or where perimeter corrections are introduced. The chosen model should contain transparent and fair rules to allow independent aggregators to fulfil their roles as intermediaries and to ensure that the final customer adequately benefits from their activities. Products should be defined on all electricity markets, including ancillary services and capacity markets, so as to encourage the participation of demand response.

Recital 15 in the Regulation

(15) Title V of Regulation (EU) 2017/2195 established that the general objective of imbalance settlement is to ensure that balance responsible parties keep their own balance or help restore the system balance in an efficient way and to provide incentives to market participants for keeping or helping to restore the system balance. To make balancing markets and the overall energy system fit for the integration of the increasing share of variable renewable energy, imbalance prices should reflect the real-time value of energy. All market participants should be financially responsible for the imbalances they cause in the system, representing the difference between the allocated volume and the final position in the market. For demand response aggregators, the allocated volume consists of the volume of energy physically activated by the participating customers' load, based on a defined measurement and baseline methodology.

Article 13 in the Directive: Aggregation contract

1. Member States shall ensure that all customers are free to purchase and sell electricity services, including aggregation, other than supply, independently from their electricity supply contract and from an electricity undertaking of their choice.

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