

ACER Decision on VOLL/CONE/RS methodology: Annex II (for information only)

Evaluation of responses to the public consultation on the Methodology for calculating the value of lost load, the cost of new entry, and the reliability standard

1 Introduction

On 4 May 2020, ENTSO-E submitted to ACER a ‘Proposal for a Methodology for calculating the Value of Lost Load, the Cost of New Entry for generation, or demand response, and the Reliability Standard in accordance with Article 23 of the Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity (recast)’ (the ‘VOLL/CONE/RS Proposal’). In the same occurrence, ENTSO-E submitted to ACER a proposal for ‘European Resource Adequacy Assessment - Methodology Proposal in accordance with Article 23 of the Electricity Regulation of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity (recast)’ (the ‘ERAA Proposal’).

On 6 May 2020, ACER launched a joint public consultation on the ERAA Proposal and the VOLL/CONE/RS Proposal, inviting Member States, the Electricity Coordination Group and relevant stakeholders to submit their comments, in accordance with Article 23(7) of Electricity Regulation. The consultation document asked stakeholders to provide views on the text of the ERAA Proposal and the VOLL/CONE/RS Proposal. The closing date for comments was 27 May 2020.

2 Responses

By the end of the consultation period, ACER received responses from thirty-seven respondents.

This evaluation paper summarises all comments on VOLL/CONE/RS Proposal and responses to them. The table below is organised according to the respective comment, as well as a response from ACER clarifying the extent to which their comments have been taken into account.

ACER wants to highlight that it might have re-elaborated the text of some observations for the sake of brevity and clarity. ACER strove to respect the content of the responses provided but to avoid any possible misunderstanding arising from summarising the observations received, the names of the respondents are not explicitly provided in the table below. For transparency reasons, full access to the original and non-confidential responses to the public consultation, explicitly mentioning the name of the stakeholder, is provided at this [webpage](#).

Respondents' views	ACER response
Part 2: VoLL/CoNE/RS proposal	
2.1 In the CONE Proposal, an initial list of technologies is set up; only technologies which fulfil criteria to become candidate Reference Technologies are then thoroughly studied. Do you agree with the way some technologies (e.g. Demand Side Response (DSR), RES, storage, etc.) are considered in the methodology for calculating the CoNE (Title 3 of VoLL/CoNE/RS Proposal)?	
16 respondents replied YES	
4 respondents replied NO	
2.2 Please elaborate on your previous answer	
<p>Five respondents highlighted that reference technologies should be mature and sufficiently available in the relevant MS. Three respondents mentioned that selection should be based on economic efficiency as mentioned in Art. 16 of the proposed methodology. Three respondents argued that DSR, storage and/or RES should not be considered as reference technologies. One respondent claimed that the consideration of DSR and storage is not mandatory based on article 23(6)(b) of Regulation 2019/943 and that it should be optional. One respondent noted that DSR/storage should be included in the CONE methodology if relevant costs and revenues can be specified; otherwise, they should be excluded from CONE estimation for at least 5 years. One respondent suggested that a minimum set of technologies should be taken into account, covering at least: rooftop PV, industrial PV, onshore wind, offshore wind, explicit DSR, RES and storage. One respondent highlighted that storage would remain a policy-driven technology, hence the non-policy criteria</p>	<p>ACER considers that pursuant to Article 23(6)(b) of the Electricity Regulation, generation and DSR are not mutually exclusive with respect to the calculation of CONE. Furthermore, pursuant to Article 22(1)(h) of Electricity Regulation, CMs “<i>shall be open to participation of all resources that are capable of providing the required technical performance, including energy storage and demand side management</i>”. Similarly, pursuant to Article 3(j) of Electricity Regulation, “safe and sustainable generation, energy storage and demand response shall participate on equal footing in the market”. In this respect, ACER considers that the notion of technology neutrality should apply in the CONE and RS calculation process.</p> <p>ACER also finds that the exclusion of technologies which benefit from State Aid (except from capacity mechanisms, described in Article 10(3)(a) of the proposed methodology), could lead to an</p>

Respondents' views	ACER response
<p>should not apply to storage. Five respondents mentioned that DSR and/or storage should be carefully assessed/evaluated before being considered as reference technologies for CONE. Three respondents further suggested that all technologies (including DSR/storage) should be considered and carefully assessed when selecting and calculating CONE. One respondent suggested that the methodology should provide high-level principles for treating DSR/storage and leave freedom to MS. One respondent claimed that, in principle, DSR shall be taken into account, but can be omitted if demand flexibility (including DSR) is fully and correctly accounted for in the resource adequacy assessment (since then no potential for further DSR entry will exist). One respondent notes that constraints on continuous energy production or load reduction should be properly taken into account in the analysis and that the ERAA exercise should provide a more in-depth characterization of the adequacy issues (stress events). One respondent noted that (in Article 10.3 (a)) excluding technologies benefiting from state aid is not appropriate and suggested to consider the technologies receiving state aid but include the state aid benefit in the CONE calculation.</p> <p>One respondent further noted that the methodology relating to CONE should be more explicit because, as it stands, it is unclear whether MS have to calculate CONE for more than one reference technology. One respondent mentioned that calculations should be performed based on a set of common and uniform criteria agreed at EU-level and not based on criteria determined unilaterally by MS.</p>	<p>incorrect methodology, because entry decisions are not fully based on subsidies.</p> <p>In this respect ACER proposes that all types of capacity resources, namely generation capacity, storage facilities or DSR, that are able to contribute to the adequacy of the territory under evaluation should be considered as candidate technologies for the purpose of calculating the CONE.</p> <p>A candidate technology shall be a reference technology if it (a) is standard technology and (b) has potential for new entry. CONE shall be calculated for reference technologies only. Any subsidy that affects the parameters for calculating CONE should be taken into account.</p>

Respondents' views	ACER response
2.3 How would you suggest that these technologies should be considered?	
1 respondent addressed the issue of transparency and non-discrimination.	ACER considers that non-discrimination between technological options should be addressed in line with the response in question 2.2. ACER also values transparency and therefore it proposes to amend the methodology as described in the response to question 3.5
2.4 Do you agree with the provisions of Article 15 of the VoLL/CoNE/RS Proposal according to which Member States can rely on their own relevant, recent and representative WACC estimates, instead of using a binding common methodology to calculate the WACC for all Member States?	
16 respondents replied YES	
7 respondents replied NO	
2.5 Please elaborate on your previous answer	
Two respondents clearly mentioned that WACC parameters and the methodology to calculate them should be a national responsibility. 19 respondents declared that the main objective should be to use the same methodology to obtain WACC estimates, but not necessarily to obtain the same WACC values, and that some flexibility should be allowed to reflect local conditions/risks and therefore provide realistic outcomes. Out of those, seven respondents highlighted that some checks are needed when using MS specificities. In particular, two respondents suggested that the use of specific parameters and particular references linked to national circumstances should be properly justified. Two respondents further proposed to perform a benchmarking exercise to ensure that different estimates are	ACER acknowledges that the WACC calculation allows for some freedom, as local specificities may strongly impact WACC values. ACER further acknowledges that WACC is a critical regulatory parameter used in various regulatory decisions. Therefore, while a more harmonised approach for the evaluation of WACC may be desirable, ACER supports flexibility with regards to the methodology used, as long as the high-level principles described in the methodology are fulfilled. ACER also observes that Annex 2 describes a methodology, which may be used to derive WACC estimates. ACER observes that significant transparency requirements were introduced in Article 17, to ensure that the WACC methodology is

Respondents' views	ACER response
<p>justified. One respondent suggested that should the common WACC methodology not be decided right away in this document, then market participants should be consulted. One participant claimed that MSs should only be allowed to use their own recent and representative WACC estimates if they can demonstrate these are in line with the binding common methodology to calculate the WACC. One respondent further suggested that a single set of data over the entire period covered by the ERAA is questionable, in view of the major developments in the energy sector anticipated and that best estimates of the evolution of the data used for the calculation of the WACC over the period of validity of the ERAA should be used, taking into account the most reliable forecasts regarding the development of the economies of each Member State as well as reasonable assumptions regarding the future maturity of the reference technologies. One respondent claimed that flexibility concerning the application of the adequacy assessment and capacity mechanisms rules is not envisaged by the co-legislators in the Electricity Regulation and that a high level of harmonisation and alignment is envisaged.</p>	<p>based on transparent, objective and verifiable criteria (pursuant to Article 23(6) of the Electricity Regulation).</p>
<p>2.6 Do you think that the main technical parameters used to calculate CONE should be harmonised across MSs?</p>	
<p>13 respondents replied YES</p>	
<p>8 respondents replied NO</p>	
<p>2.7 Please elaborate on your previous answer</p>	

Respondents' views	ACER response
<p>Nine respondents favoured using both harmonized EU parameters and national values to reflect differences between MS. Out of these:</p> <p>One respondent also expressed doubts on the relevance of harmonized parameters and suggested that some room for flexibility should be left to the MSs.</p> <p>One respondent further pointed that the list of technical parameters should not differ between MSs, but that the value of these parameters should depend on local or regional conditions.</p> <p>One respondent focused on the de-rating factors and further noted that the methodology should determine which technical parameters should be harmonized, not the parameters themselves.</p> <p>One respondent noted that the values of the national specific parameters should be coherent with those of relevant parameters used by MSs in CM design.</p> <p>Five respondents favoured defining country-specific technical parameters to reflect country specificities, rather than harmonised data. These respondents claimed that some technical parameters could be defined on a national basis because the mix of resources needed to comply with adequacy standards is not the same across Europe.</p> <p>One respondent claimed that only a sub-set of basic technical parameters should be harmonised, while the main technical parameters could differ.</p>	<p>ACER acknowledges that differences and specificities may apply between MSs concerning the type of capacity resources that are (potentially) available, as well as the market and system framework under which these resources operate. These differences should be reflected in the technical parameters that are used for the calculation of CONE and, to a larger extent, the values of these parameters.</p> <p>ACER thus proposes to maintain flexibility to estimate realistic technical parameters. ACER however suggests that the entities calculating CONE in various jurisdictions coordinate in order to ensure consistency. Furthermore, ACER observes that significant transparency requirements were introduced in Article 17, to ensure that the methodology is based on transparent, objective and verifiable criteria (pursuant to Article 23(6) of the Electricity Regulation).</p>

Respondents' views	ACER response
<p>One respondent suggested that flexibility should be left to the MSs.</p> <p>One respondent mentioned that technical parameters should be defined at national level.</p> <p>One respondent further suggested to delete the quote “<i>or in similar countries</i>” in the article 11(2)(i) of VOLL/CONE/RS proposal.</p>	
<p>2.8 What are the main technical parameters used to calculate CONE that could be different?</p>	
<p>One respondent mentioned that, at least for WACC, a common formula is needed.</p> <p>One respondent suggested that differences could apply to any technical or non-technical parameter where conditions can vary regionally/locally (e.g. net power output, net efficiency, local labour costs impacting CAPEX/OPEX estimates, tax rates, depreciation rules, etc.).</p> <p>One respondent referred to the net capacity or the net efficiency, which could depend from the plant setting and the usual weather conditions (temperature).</p> <p>One respondent provided as examples the timing of the calculation (Article 9.2) which could be linked to the update of a national CM, and the definition of stress events (Article 12.2).</p>	<p>ACER acknowledges that technical parameters may be impacted by local specificities, and thus suggests leaving some freedom to reflect specificities, with a suggestion to coordinate to ensure consistency and transparency requirements (see previous answer).</p>
<p>2.9 Do you think that renewal or prolongation of existing resource capacity should be considered as a candidate technology that can address the required capacity needs and thus be taken into account in the calculation of the reliability standard (Annex 2(iii) of VoLL/CoNE/RS Proposal)?</p>	
<p>5 respondents replied YES</p>	

Respondents' views	ACER response
15 respondents replied NO	
2.10 Please elaborate on your previous answer	
<p><u>Of those respondents that replied NO:</u></p> <p>Three respondents highlighted that existing capacity, demand response growth and storage additions, as well as interconnector investments can in most cases be enough to secure capacity adequacy, however, for the reliability standard calculations new capacity is the last resource which should determine the CONE value.</p> <p>Three respondents noted that the CONE provides a back-stop on the calculation of the RS in the form of new capacity entering the market to ensure adequacy. This back-stop cannot be performed by existing capacity, as it is limited in volume compared to new capacity. Therefore, the candidate technologies for CONE should be limited to the New Entry that its name implies. One respondent further claimed that since the renewal of existing resource capacity is about replacing an old capacity by an investment in a new capacity, in practice it is taken into account in the assumptions made when estimating the CONE of this new technology. On the prolongation of an existing capacity resource, the same respondent mentioned that the prolongation of an existing capacity resource is a standard asset management decision related to the closure of the asset and as such it should be part of the economic assessment, but it does not relate to a new entry. However, it points out to a few specific (existing) assets/technologies where capital-intensive investments are required for the energy transition and that may be</p>	<p>ACER considers that the RS methodology calculates a level of security of supply perceived as socioeconomically optimal.</p> <p>In this respect, ACER believes that all capacity resources that may contribute to adequacy should be considered and sees no reason why the prolongation or renewal of existing capacity resource facilities should not, in principle, be taken into account as capacity available for the fulfilment of capacity needs. The cost of renewal/prolongation (CORP) shall follow the principles of the CONE methodology. Renewals/prolongation shall however not be considered in the CONE methodology, as they do not qualify as “new entry”.</p> <p>In particular, pursuant to Article 22(1)(h) of Electricity Regulation, any capacity mechanism shall be open to participation of all resources that are capable of providing the technical performance. ACER therefore considers that renewal/prolongation of existing assets should be taken into account, under the same conditions (i.e. criteria for reference technology) as new entrants.</p> <p>ACER considers that the general methodology to estimate risks and value them should be similar between new entrants and renewal/prolongation.</p> <p>ACER believes that, to ensure a non-discriminatory process (in line with Article 22(1)(d) of Electricity Regulation), the minimum capacity need for RS shall apply indifferently to new entrants and</p>

Respondents' views	ACER response
<p>deployed on a limited number of sites (e.g. investments in pumped hydro to achieve longer-term operation and/or add some capacity/energy). Although such cases might not be considered as “non-policy, standard technology for new entry” (see Article 10.3 of the proposed methodology) it could justify somehow to consider these specific projects as candidate technologies if deemed relevant (and in line with the national energy policy), although this is a deviation from a technology-neutral approach.</p> <p>One respondent mentioned that the criteria used to assess existing or prolonged schemes are outdated given that some reference technologies like coal or gas power plants may not qualify when applying new criteria as reference technologies.</p> <p>Three respondents focused on the fact that renewal or prolongation of existing resources may be subject to contradicting political decisions and to unexpected evolutions of economic and regulatory conditions (e.g. environmental regulation, etc.) that may influence decisions of market participants. It is thus difficult to anticipate whether these investments will actually be undertaken to meet the expected capacity needs. Furthermore, prolongation of existing assets may be limited in time (e.g. 10 extra years) while new capacity is able to ensure adequacy over a longer time period.</p> <p>One respondent focused on the limited possibility for renewal or prolongation, and suggested that unless a system already meets the RS, it seems unreasonable to consider it as a reference technology.</p> <p>One respondent mentioned that the contribution of all available</p>	<p>renewal/prolongation. Similarly, ACER considers that a technology-neutral approach should be followed for the calculation of the RS, hence renewal/prolongation of existing resource capacities may be part of the mix of technologies that fulfil the minimum capacity need for RS, although this does not imply a priori that renewal/prolongation will be the marginal technology that will define the RS.</p> <p>ACER considers that the potential use of values related to the CONE, VOLL or RS methodologies within capacity mechanisms is beyond the scope of the VOLL/CONE/RS methodology.</p> <p>ACER acknowledges that some flexibility may be necessary to reflect local specificities. However, ACER introduced transparency requirements in Article 21, to ensure that the RS methodology is based on transparent, objective and verifiable criteria in line with Article 23(6) of Electricity Regulation.</p>

Respondents' views	ACER response
<p>capacities (including renewal/prolongation) should be taken into account in the adequacy analysis, but not necessarily in the CONE methodology. It further raised concerns that if CONE is miscalibrated, there is a risk to penalise the functioning of the markets: a capacity market might not attract the new investments needed and therefore might not meet its objective.</p> <p>One respondent pointed that CONE should be a stable parameter and shall not reflect a transitional/limited option.</p> <p>One respondent claimed that including renewal/prolongation of the existing resources capacity in CONE calculations may underestimate its value and simultaneously, artificially increase the reliability standard's goal (lower LOLE). Lower level of CONE in a given country may aggravate conditions for investors and hamper the process of technological transformation.</p> <p>One respondent focused on the need for EU to attract investments in new, low- or zero-carbon and flexible capacity in order to achieve its very ambitious energy and climate targets. Therefore, any measure or decision that prolongs the economic life of polluting and/or aged technology is contra-productive.</p> <p><u>Of the respondents that replied YES:</u></p> <p>One respondent considered it obvious that renewal or prolongation of existing resource capacity should be considered as a candidate technology and be taken into account in the calculation of the RS.</p> <p>Two respondent mentioned that in France, it is possible that no need for new capacity (except policy units such as renewables) is</p>	

Respondents' views	ACER response
<p>identified in the next few years. However, prolongation/refurbishment of existing capacities may be required to reach the RS. Such a configuration should be taken into account in the methodology. They might be the cheapest means to maintain adequacy in a system that starts from a state where adequacy is ensured.</p> <p>One respondent replied that according to Electricity Regulation, any capacity mechanism shall select capacity providers by means of a transparent, non-discriminatory and competitive process.</p> <p>One respondent suggested that the methodology should leave as much flexibility as possible at national level on whether and how to consider renewal/prolongation among the candidate technologies.</p>	
<p>2.11 Do you agree with the provisions Annex 3 of the VOLL/CONE/RS Proposal that a range of values of VOLL and CONE should be used to define the reliability standard?</p>	
<p>23 respondents replied YES</p>	
<p>3 respondents replied NO</p>	
<p>2.12 Please elaborate on your previous answer</p>	
<p><u>Of the respondents that replied YES:</u></p> <p>17 respondents highlighted the issue of uncertainty and diversity of the assumptions used in the methodology, which justifies using ranges.</p> <p>Three respondents focused on the fact that ranges of VOLL and CONE can better reflect future developments and needs.</p>	<p>ACER first observes that, pursuant to Article 23(6) of Electricity Regulation, the RS methodology shall focus on “calculating” RS, and thus does not describe how MSs “set” the reliability standard in line with Article 25 of Electricity Regulation.</p>

Respondents' views	ACER response
<p>Three respondents mentioned that complexity exists in the methodology and assumption, transparency is needed, ranges can deliver better.</p> <p>13 respondents further noted that ranges are necessary to respect MSs sovereignty on security of supply ('SoS') choices.</p> <p>One respondent stressed that, since VOLLs are unique to each consumer, ranges better allow to get closer to individual VOLLs and not to pick higher ones. It further suggested that DSR needs to be properly accounted for in VOLL calculation.</p> <p>One respondent supported the use of a range, claiming that otherwise, the target LOLE values will be essentially higher than the ones currently in use.</p> <p><u>Of those that replied NO:</u></p> <p>Two respondents raised the issue of "discrete" load shedding implying higher actual EENS than the theoretical one, therefore higher net benefit of procuring marginal capacity.</p> <p>One respondent suggested that, given the stochastic distribution of incremental capacity, the average LOLE expected near the target capacity need should be compared with the LOLE target and if the expected average LOLE is higher, the reliability standard or capacity need should be adjusted accordingly. Furthermore, it suggested that the WTA method is more appropriate to estimate VOLL, inter alia being able to capture qualitative consequences of ENS, suggesting at least a higher weight to WTA estimations (compared to WTP).</p>	<p>ACER understands that uncertainty ranges may provide additional information about the uncertainty underlying RS calculations. However, ACER acknowledges that very many diverse parameters may impact uncertainty, and that the VOLL/CONE/RS Proposal did not describe how to estimate the uncertainty range. As a result, estimating uncertainty may require significant resources, while sometimes providing limited benefits. Finally, the estimation of the uncertainty range may need to reflect local specificities. Therefore ACER believes that it would be preferable at this point to make the provision of ranges of values optional (in line with e.g. Article 11(1) of Electricity regulation requiring "a single estimate of the [VOLL]"). Enhanced transparency requirements in line with Article 21 ensure that the RS methodology is based on transparent, objective and verifiable criteria in line with Article 23(6) of Electricity Regulation.</p> <p>Regarding WTA and WTP, ACER observes that Article 2 of Electricity Regulation defines VOLL as the WTP of consumers. However, ACER suggests allowing additional cost-estimation methods, if these additional cost-estimation methods lead to a more robust VOLL (i.e. WTP) estimate.</p> <p>Regarding the issue of "discrete" load-shedding (and additional capacity), ACER considers that the marginal approach included in ENTSO-E's Proposal strikes a balance between realistic results and a feasible implementation of the RS methodology.</p> <p>Finally, in ACER's understanding, voluntary interruption of electricity supply is modelled through DSR, whereas load-shedding (and VOLL) reflects involuntary interruption of supply. The ERAA</p>

Respondents' views	ACER response
<p>One respondents claimed that with ranges, EU comparability and harmonization would be lost, and pointed to the possible big range of values for the parameters based on the underlying assumptions that might lead to acceptability issues. It further suggested that VOLLs should be determined at national level and calculated as a marginal value, rather than using the calibration of weights; besides, it should be preferable that the ERAA should use a harmonized value of VOLL and CONE.</p> <p>One respondent mentioned that VOLL/CONE/RS should be determined on the basis of harmonised standards applying equally to all MS.</p>	<p>methodology introduces consistency requirement to ensure that the VOLL and ERAA methodology consistently take DSR into account.</p>
<p>2.13 How should the methodology define the approach for extracting a single value from each range when defining the reliability standard?</p>	
<p>One respondent suggested that, for VOLL, the share of consumers offering implicit DSR per category could be determined, and taken into account in the calculation.</p> <p>Eleven respondents mentioned that the choice of the RS should be left to the MSs.</p> <p>One respondent pointed out that whatever the method chosen it should be transparent</p>	<p>To ensure consistency with the CONE and VOLL methodologies, ACER suggests that the best estimate of the calculated RS relies on the best estimate of VOLL and CONE (and CORP). How MSs set the RS is beyond the scope of the VOLL/CONE/RS methodology.</p> <p>Enhanced transparency requirements in line with Article 21 ensure that the RS methodology is based on transparent, objective and verifiable criteria in line with Article 23(6) of Electricity Regulation.</p>
<p>2.14 Do you have any other major observation on the VoLL/CoNE/RS Proposal? (if so, please indicate clearly the related Article, paragraph of the proposal, and add a sufficient explanation)</p>	

Respondents' views	ACER response
<p>Concern over the use of low (minimum) VOLL for RS calculations.</p> <p>Three respondents raised concerns over economic competitiveness and social rights from lower SoS levels due to higher LOLE values, as well as over imbalances caused by low levels of SoS in different MSs. Both raised concerns over the deprivation of MS rights regarding SoS.</p> <p>One respondent further suggested that the current established RS should be taken into account in the methodology, and that in justified conditions LOLE level could be modified to the minimum level of LOLE, which was calculated in another Member State.</p>	<p>ACER highlights that the methodology pursuant to Article 23(6) of the Electricity Regulation has the sole purpose of calculating VOLL, CONE and RS estimates. The final setting of the RS in particular is an obligation of the MS, which is beyond the scope of the methodology.</p>
<p>Appropriate evaluation of elastic demand (art. 7).</p> <p>One respondent mentioned that the proposed exclusion of price-responsive consumers may mislead the estimation of VOLL because 1) only part of their demand may be elastic and 2) the demand of these customers is elastic only under very specific circumstances.</p> <p>One respondent further noted that if the difficulties in distinguishing the share of “elastic consumers” or “DSR” over the adequacy assessment period were also taken into account, a single approach to VOLL estimate based on consumers segmentation would be the preferred solution.</p> <p>One respondent highlighted that there should be an alignment between the treatment of price-elastic demand between the VOLL calculation and the ERAA methodologies. Ignoring any price-</p>	<p>ACER considers that, in order to identify realistic and robust resource adequacy concerns pursuant to Article 23(1) of the Electricity Regulation, consistency should be ensured between the ERAA and RS (thus VOLL) methodologies. ACER considers that, to avoid double-counting, the part of demand which is price-responsive should be consistent between ERAA and VOLL calculations: only demand which is not considered as price-elastic should thus be considered for VOLL calculations, and demand considered price-elastic for VOLL should also be considered as DSR in ERAA. ACER agrees that the inelastic share of price-responsive consumers may be considered for VOLL calculations (subject to feasibility).</p>

Respondents' views	ACER response
<p>elastic load for VOLL calculation implies regarding it as DSR, which is not properly mentioned in the ERAA methodology (which should be amended accordingly).</p> <p>One respondent suggested that the VOLL estimates should take account of all consumers, possibly with de-rating factors for reactive consumers, and only exclude DSR to the extent covered by the elasticity of consumer demand.</p> <p>Three respondents raised the issue of coherence between parameters used</p> <ul style="list-style-type: none"> • for calculating the reliability standard in CRM and • in national network development plans. 	<p>While ACER agrees that consistency in the use of parameters should be established, it observes that the exact VOLL definition may depend on the purpose of its use (e.g. regarding pre-notification, duration of the ENS events etc.).</p>
<p>VOLL calculation.</p> <p>One respondent raised concerns over the proposed RS calculation as it does not capture (a) the actual economic effect resulting from market failure in the event of blackout as it allows for scenarios where reserves are close to zero and neglects long-term effects (b) the effect of increased risk of network-related overloads, due to stresses caused by local capacity imbalances in the system.</p> <p>One respondent mentions that VOLL estimates should capture all the induced consequences of a loss of load, which can extend far beyond the period during which this loss of load happens. It further suggests that the parameters of VOLL for industry should be calculated with a long-term perspective over the whole 10yr ERAA period.</p>	<p>Pursuant to Article 11(1) of Electricity Regulation, the single VOLL may be estimated at the level of a bidding zone and for the purpose of defining the RS for adequacy. Adequacy concerns shall also be identified at bidding zone level pursuant to Article 23(5)(a) of Electricity Regulation. Local grid effects which affect cross-zonal capacity may be considered in the ERAA methodology, e.g. in Article 4(6)(c).</p> <p>In order to increase the robustness of sectoral VOLL estimates (e.g. regarding long-term effects), ACER considers that Article 6(9) allows the entity calculating sectoral VOLLs to cross-check survey results with macroeconomic estimates.</p> <p>ACER updated the VOLL methodology to include the frequency of outages in the parameters used to evaluate the sectoral VOLLs.</p>

Respondents' views	ACER response
<p>One respondent suggests including the frequency of outages among the characteristics of outages in Article 5 to evaluate the VOLL. Also, it suggest that the use of existing surveys for the determination of the VOLL should only be allowed if they meet all the criteria of this methodology, otherwise they should be performed again (Art 6.1).</p>	<p>ACER agrees that pre-existing surveys may be taken into account if they are consistent with the VOLL methodology.</p>
<p>Technologies for CONE.</p> <p>One respondent mentioned that all standard technologies (i.e. mature, not bound or banned by the national or European energy policy, and for which reliable cost estimates exist) that can contribute to adequacy should be included in the potential Reference Technologies, whatever the way they are financed. It underlines that if the CONE only reflects the cost of merchant new entrants, with a high WACC then the RS calculated would normally be automatically fulfilled in a well-functioning market (without price caps), and the ERAA would become a circular exercise.</p>	<p>See response to views received for question 2.2.</p>
<p>De-rating capacity.</p> <p>One respondent noted that the de-rating factors introduced in Article 16(3) should appropriately reflect the duration of stress events, as it may impact the de-rating factor for energy constrained resources such as DSR, RES and storage.</p>	<p>ACER considers that, in line with Article 12(2) and Annex 3(2) of the CONE methodology, the impact of energy constraints on the de-rating factor should be reflected.</p>
<p>Load shedding plans.</p> <p>Two respondents mentioned that the actual procedures that would be applied by TSOs in case of adequacy issue should be taken into</p>	<p>ACER considers that manual load-shedding expected to apply pursuant to Article 11(6) of the Emergency and Restoration Regulation should be reflected in the VOLL methodology.</p>

Respondents' views	ACER response
<p>account in the calculation of the reliability standard. The actual procedure should cover the following aspects: when is load shedding actually triggered? What are the processes to enter and exit rotating load shedding schemes? What could lead to an uncontrolled blackout that would require a long and complex power system recovery?</p>	
<p>One respondent mentioned that a RS based solely on the LOLE seems inappropriate and non-compliant with Article 25(3) of Electricity Regulation, acknowledging however the absence of economic justifications for such a criterion.</p>	<p>ACER considers that, by requesting that the single VOLL for RS be expressed based on EENS, the RS strives to be expressed as EENS to fulfil Article 25(3) of Electricity Regulation.</p>
<p>One respondent proposed to include inflation in the economic parameters (not expressed in real terms)</p>	<p>Since both the economic parameters and the WACC are expressed in real terms, the calculated equivalent annual cost shall be equivalent with a case where nominal costs were taken into consideration. In order to facilitate computations and to be consistent with ERAA and other pan-European assessments, including ENTSO-E's TYNDP, ACER believes that costs expressed in real terms are preferable.</p>
<p>One respondent proposed that given the importance of VOLL/CONE, market participants should remain involved in the definition process and allowed to react on the final national propositions through a public consultation.</p>	<p>ACER introduced transparency requirements in the CONE and VOLL methodologies, to ensure that they are based on transparent, objective and verifiable criteria in line with Article 23(6) of Electricity Regulation</p>

Respondents' views	ACER response
Part 3: Both proposals	
3.1 Do you see an interplay between economic viability assessments performed in ERAA and reliability standard calculation?	
11 respondents replied YES	
7 respondents replied NO	
3.2 Please elaborate on your previous answer	
<p>There is and should be an interplay between EVA and RS because:</p> <ul style="list-style-type: none"> a. need for consistency. Only a proper economic modelling / EVA can provide for a properly calculated level of SoS to compare with the individual RS. Without a proper economic modelling of the European power system, there is a high risk that the outcome of the ERAA will be compared with RS even though they are not comparable. This risk increases towards the later years of the 10-year period observed in the ERAA, as extrapolations or “expert guesses” tend to be even less reliable (1 respondent); b. technical and economic data are used for EVA and RS calculation should be the same (1 respondent); c. VOLL is the common parameter. VOLL should be consistent across ERAA and RS calculation. This value should be the average VOLL (instead of max VOLL) as it represents all inflexible demand, complies with Art 10 and reduces the risk of over/under procurement (1 respondent); 	<p>ACER observes that some of the points raised are not relevant for the VOLL/CONE/RS methodology and is treated in Annex II of the ACER Decision No 24/2020 on the ERAA methodology.</p> <p>Furthermore, ACER observes that pursuant to Article 5(10) of ERAA methodology, for the technologies used in ERAA which are also reference technologies for CONE or CORP, the economic and technical data used for ERAA (except the WACC) shall be identical to the latest available best estimate used in the most recent CONE and CORP calculations pursuant to the CONE and RS methodologies;</p>

Respondents' views	ACER response
<p>d. if prices are not allowed to reach the VOLL used for assessing RS, then the market will not incentivise sufficient resources over the long term to meet the RS. This, in turn, would create inconsistency between the RS and the EVA. A price cap based on VOLL is a theoretically efficient market price during unserved energy events because it reflects the maximum price that customers are willing to pay to avoid disconnections (1 respondent)];</p> <p>e. Member States must contribute to European adequacy in a coherent and efficient way, while respecting the subsidiarity principle (1 respondent); and</p> <p>f. WACC is the link: RS/LOLE is influenced by WACC, which should be set at a level ensuring the profitability of the new unit providing missing capacity in the system. In the forecasts of the demand/supply balance, both new investments and the amount of decommissioned power are significant. They largely depend on economic profitability. In this context, it is worth remembering that the problem of missing money led to insufficient power in many countries. (1 respondent).</p>	
<p>There is no (strong) interplay or even if there is, the two calculations should be kept separate, because:</p> <p>a. calculations should be independent to keep it simple (3 respondents);</p> <p>b. to avoid circular reasoning and market failures (1 respondent);</p> <p>c. no significant added value in linking them (2 respondents);</p>	<p>ACER observes that:</p> <p>a. consistency should be ensured between the ERAA and VOLL/CONE/RS methodologies. However, ACER acknowledges that introducing circularity between the methodologies may unnecessarily increase the complexity. Therefore, ACER simplified the interdependency on some</p>

Respondents' views	ACER response
<p>d. adequacy targets estimation (through VOLL/CONE/RS) is a different topic than checking to what extent these targets can be achieved relying solely on energy-only markets (EVA) (3 respondents);</p> <p>e. no strong interplay besides that EVA results can be compared with the RS chosen for the concerned BZ (using the proposed methodology) in order to identify adequacy risks (2 respondents);</p> <p>f. one possible link could be the number of hours with scarcity prices, during which the existing assets receive revenues taken into account in their EVA. But given that hours with scarcity pricing are expected to be limited, this should rather not be part of a long-term adequacy assessment. (2 respondents);</p> <p>g. even if VOLL could be such a common parameter (as EVA would be impacted if DA/ID price reaches VOLL) it is unlikely that market price will reach VOLL with increasing DR. (3 respondents);</p>	<p>topics (e.g. regarding the impact of EENS on VOLL calculations);</p> <p>b. some points are not relevant for the VOLL/CONE/RS methodology and are treated in Annex II of the ACER Decision No 24/2020 on the ERAA methodology.</p>

Respondents' views	ACER response
<p>h. in the absence of market failures, this can result in a circular assessment, RS being automatically fulfilled if the generation mix is adapted based on the estimated economic viability of the assets. In reality, market failures exist, and it is extremely difficult to properly model the dynamics of investment decisions, especially investment risk. Therefore, no new asset should be added in the scenarios based on an economic viability assessment: the ERAA should only, based on the existing generation fleet and the identified decommissioning/mothballing needs (which are much easier to assess), identify the capacity gap in each country to ensure the fulfilment of RS. This analysis being done, it should be up to each MS do define the appropriate means to bridge this gap. (2 respondents); and</p> <p>i. there is a need for consistency between VOLL and max clearing price (2 respondents).</p>	
<p>3.3 How should this interplay affect CONE, VOLL and maximum clearing price, in order to ensure a realistic and consistent modelling framework?</p>	
<p>Limited added value in keeping the link between RS and ERAA, risk of circular calculation: it should be avoided that the ERAA modelling enters in a circular calculation, with the number of scarcity hours that is an output of the process reinserted as an input and adjusted to ensure sufficient revenues for assets to remain economically viable. This would make the outcome of the ERAA of limited, practical value (2 respondents).</p>	<p>ACER observes that:</p> <p>a. consistency should be ensured between the ERAA and VOLL/CONE/RS methodologies. However, ACER acknowledges that introducing circularity between the methodologies may unnecessarily increase the complexity. Therefore, ACER simplified the interdependency on some topics (e.g. regarding the impact of EENS on VOLL calculations);</p>

Respondents' views	ACER response
<p>Reflecting market risks in ERAA:</p> <ul style="list-style-type: none"> a. costs applied in ERAA (scenario without CMs) should include a component due to risks characterizing current market design (e.g. risks in a competitive energy-only market due to the impossibility to stabilise market revenues and due to the unpredictability of the hours when a relevant share of fixed costs can be covered). Such component should be defined at national level (1 respondent); b. EVA should aim to include, as best as possible, risk considerations (risk aversion metrics). Consulting financial sector on this point might be revealing, plus need to take views of the MSs on the evolution of their power systems (1 respondent); and c. against ENTSO-E proposal to consider in ERAA the effect of risk aversion towards price volatility/spikes to improve the robustness of the EVA against certain limited cases (of price spikes): this is not justified, allows for subjective interpretation, undermines the importance of scarcity pricing (allowing the TSOs to disregard modelled price spikes). Any risk aversion should be reflected by modifying the hurdle rates used in the EVA, and that ENTSO-E and TSOs clearly report the aforementioned changes and the reasons for them. (1 respondent). <p>Need for consistency between CONE, VOLL and the maximum clearing price used in the economic viability assessments of the ERAA. (1 respondent)</p>	<ul style="list-style-type: none"> b. for the technologies used in ERAA which are also reference technologies for CONE or CORP, the economic and technical data used for ERAA (except the WACC) shall be identical to the latest available best estimate used in the most recent CONE and CORP calculations pursuant to the CONE and RS methodologies; and c. some points are not relevant for the VOLL/CONE/RS methodology and are treated in Annex II of the ACER Decision No 24/2020 on the ERAA methodology

Respondents' views	ACER response
Maximum clearing price shall be consistent with national and European policies and constraints. (1 respondent).	
3.4 Do you think that the proposed involvement of stakeholders in both Proposals is sufficient to guarantee robustness and transparency on scenario assumptions, input datasets, modelling approaches (e.g. with respect to the links with national energy policy targets and plans, DSR modelling), etc.?	
9 respondents replied YES	
11 respondents replied NO	
3.5 Please elaborate on your previous answer	
<p>The proposed involvement of stakeholders is deemed sufficient:</p> <ul style="list-style-type: none"> a. it is important that the proposed rules will be followed both on European level and in each Member State (3 respondents); b. the process should also be a regular item in the TSO's general stakeholder groups and meetings (1 respondent); c. the high-level character of the methodologies raises criticism: there are concerns on the extent to which the opinions of stakeholders will be taken into account. It is necessary that consultations should not be conducted only to comply with legal obligations but to be substantial (1 respondent); d. MSs must guarantee, at national level, the involvement of stakeholders (1 respondent); 	<p>ACER observes that:</p> <ul style="list-style-type: none"> a. the text of the methodologies have been improved to ensure applicability and full alignment with the regulatory framework; b. some points are not relevant for the VOLL/CONE/RS methodology and are treated in Annex II of the ACER Decision No 24/2020 on the ERAA methodology; and c. significant transparency requirements were introduced in Articles 8, 17 and 21, to ensure that the VOLL/CONE/RS methodology is based on transparent, objective and verifiable criteria (pursuant to Article 23(6) of the Electricity Regulation). <p>ACER also acknowledges the importance of the methodology for MSs and other stakeholders, as well as the complexity underlying them. Consequently, ACER agrees that enhanced stakeholders'</p>

Respondents' views	ACER response
<p>e. a concrete framework for stakeholders' involvement should be established, which needs to be regularly reviewed. It further suggests fostering a close cooperation between ENTSO-E and market players, to ensure that the outcome of the ERAA exercise is close to the business reality faced by market players (1 respondent); and</p> <p>f. further stakeholders' engagement during the analysis and approval process of the ERAA methodology performed by ACER (1 respondent)</p> <p>The proposed involvement of stakeholders is deemed not sufficient (1 respondent):</p> <p>a. use of a panel of technical experts to reduce the reliance on a single annual public consultation, and to provide independent scrutiny of ENTSO-E's analysis and assumptions. Data validation procedure should be established. The proposed panel should i) be a purely technical not policy advisory group; ii) the focus on scrutinizing the analysis in ENTSO-E's annual resource adequacy assessment; iii) publish a report with the findings; and iv) consist of independent members not being representatives of any current or previous employers, trade associations or membership organizations (1 respondent);</p> <p>b. here should be full transparency on both the input data and on the ERAA model: an open source approach is suggested (3 respondent);</p> <p>c. a single annual consultation enough (1 respondent);</p>	<p>involvement is necessary (on specific topics, as well as to follow the general implementation) and would contribute to the development of state-of-the art, robust and reliable methodologies.</p>

Respondents' views	ACER response
<p>d. MSs and TSOs should define issues and parameters that should be determined at national level and they should have the possibility to access inputs, assumptions, approaches, algorithms and outcomes of ERAA, at least those ones with direct or indirect reference to electricity system under their responsibility (1 respondent); and</p> <p>e. a proactive and formalised engagement should be incentivised, particularly in the first years of undertaking the assessment, to accommodate the steep learning curve in the first years of implementation and recommend the creation of working groups of technical experts and interested stakeholders to address some of the key elements of the assessment, co-managed by ENTSO-E and ACER. The following issues appear critical: i) demand forecasting and DSR assessments; ii) economic viability assessments; iii) scenarios and assumptions; and iv) effects of climate on the assessment and the report itself (1 respondent).</p>	
<p>One respondent expressed concerns that during the process of developing the process of developing best available technologies conclusions (incorporating emission limit values) proper analysis and use of stakeholders' opinions were not always observed.</p>	<p>This view is not relevant for the VOLL/CONE/RS methodology.</p>
<p>3.6 How should stakeholders be involved to guarantee robustness and transparency on scenario assumptions, input, datasets, modelling approaches, (e.g. with respect to the links with national energy policy targets and plans, DSR modelling), etc.?</p>	

Respondents' views	ACER response
<p>Importance of ensuring a meaningful consultation process including early involvement of a wide range of stakeholders. Preliminary results should be presented to stakeholders. Feedback provided by stakeholders should be considered in the final publication (10 respondents).</p> <p>Need of an independent technical review and scrutiny of the input data and assumptions (2 respondents).</p> <p>A number of more specific proposals were put forward:</p> <ol style="list-style-type: none"> organise regular national TSOs' stakeholder interaction and workshops to collect national input (3 respondents); provide an open source model available and auditable (1 respondent); allow Member States and TSOs the possibility to access inputs, assumptions, approaches, algorithms and outcomes of ERAA (1 respondent); market participants should be consulted to give their view and responsible authorities should justify any perceived deviation from the methodology's letter or spirit. (1 respondent); ENTSO-E could arrange regional meetings with market participants and consumer and business associations to discuss in more detail regional issues. (1 respondent); and current drafting of Articles 8 and 9 of the ERAA draft methodology does not appear fully compliant with the requirements of Article 31 of the (2 participants). 	<p>ACER considers that significant transparency requirements were introduced in Articles 8, 17 and 21, to ensure that the VOLL/CONE/RS methodology is based on transparent, objective and verifiable criteria (pursuant to Article 23(6) of the Electricity Regulation).</p> <p>ACER however considers that transparency requirements shall be proportionate, e.g. that they should be subject to justified confidentiality claims.</p> <p>Some points are not relevant for the VOLL/CONE/RS methodology and are treated in Annex II of the ACER Decision No 24/2020 on the ERAA methodology.</p>

Respondents' views	ACER response
3.7 How should stakeholders be involved to support the implementation of the methodologies described in the Proposals?	
<p>It is crucial to ensure a meaningful consultation of stakeholders to support the implementation of the methodologies (16 respondents).</p> <p>Most respondents consider that stakeholders may be involved by:</p> <ol style="list-style-type: none"> participation in workshops, stakeholders groups and public consultations at national and European level; providing a technical review and scrutinising the input data, assumptions, approaches, algorithms and outcomes, for which effective stakeholders access to relevant data and materials is of critical importance; and need for transparent and equal treatment of the opinions gathered (1 respondent). <p>Specific proposals are listed below:</p> <ol style="list-style-type: none"> implementation should be a subject in TSO's market stakeholder groups, and the TSOs should also discuss it with stakeholders through national energy associations (6 respondents); organisation of workshops during the conception phase of the methodologies (1 respondent); 	<p>See ACAER's response to similar views expressed on question 3.5.</p>

Respondents' views	ACER response
<ul style="list-style-type: none"> c. stakeholders' participation in data collection stages (by ENTSO-E and TSOs) to enrich databases, studies and assessments. Methodologies should define how participation in this analysis is possible (1 respondent); d. ERAA preliminary results to be presented and discussed before the publication of the report. Furthermore, the national input to ERAA data done by TSOs based on regular national stakeholder interaction and workshops. (1 respondent); e. ENTSO-E to have technical discussions with the stakeholders' experts in energy market modelling and economic analysis of investment files (One respondent). 	
3.8 How would you increase stakeholder interaction with the aim to improve the methodologies towards possible future updates?	
<p>It is suggested to maintain active stakeholder engagement and interaction in a future revision or update of the ERAA and for recalculation of VOLL, CONE or RS.</p> <p>Specific proposals to increase stakeholder participation are listed below:</p> <ul style="list-style-type: none"> a. TSOs should arrange national, regional and European-level stakeholder workshops to evaluate the process and the outcomes of its implementation, and to propose improvements for future updates (2 respondents); b. sector stakeholders should be consulted if methodologies are revised, in close interaction. There is a need to revise VOLL and CONE calculation in shorter periods, and stakeholder involvement must be guaranteed for any revision of 	<p>See ACERs's response to similar views expressed on question 3.5.</p>

Respondents' views	ACER response
<p>methodologies or calculation. This involvement should be promoted by ENTSO-E, the TSOs and the competent national regulators and authorities (1 respondent);</p> <p>c. stakeholders could be involved in the dedicated work stream of TSOs. National input to ERAA data and the overall ERAA work done by national TSOs should be based on regular national stakeholder interaction and workshops (1 respondent);</p> <p>d. ENTSO-E and ACER to create working groups for informing and further developing the methodologies. Groups should consist of experts and relevant stakeholders in the different areas of interest. ACER should proactively consult stakeholders to identify the main issues with the current methodology and draw a roadmap for its development. This should be independent, but should consider the proposed roadmap that ENTSO-E is planning to develop as part of the methodology (Article 8(4.7)) (1 respondent);</p> <p>e. systematic consultation of market participants when either the VOLL, CONE or RS are (re)calculated in each Member State (1 respondent);</p> <p>f. assessment of the feedback given by stakeholders in each step of the process. Reports on consultations from ENTSSOE shall be fully available (1 respondent); and</p> <p>g. expert stakeholder teams should function continuously, given that resource adequacy assessment aspects in the area of energy are very complex. Create a network of experts who will</p>	

Respondents' views	ACER response
participate in these processes on an ongoing basis (1 respondent).	

Respondents' views	ACER response
Part 4: Conclusion	
4. Please provide any further comment	
Both ERAA and VOLL/CONE/RS Proposals shall aim to harmonize as much assessments and variables as possible at EU level (including WACC, de-rating factors, etc.), and shall only leave limited room for MS to adjust those variables (preferably in some pre-determined ranges) (1 respondent).	See ACER's response to similar views expressed in questions 2.6 and 2.8.
The importance of the involvement of the stakeholders cannot be overestimated and future development should allow for this. In the current process, time to reply to consultation was limited, given the many changes in market rules occurring since the pre-process of development of the Third Energy Package. The respondent found the short deadlines applied by ACER unreasonable: the consultation process should be at least six weeks (1 respondent).	ACER acknowledges the need of a proper consultation of stakeholders. On the other hand, ACER stresses that legal deadlines often constrain the timeline of the approval process (set in Article 27(4) of the Electricity Regulation).
ACER should have informed better respondents to the online questionnaire about the features of the online tool (replying "Yes" or "No" to some answers in ACER's online survey leads to more or less questions appearing in the survey) (1 respondent).	While this is not the first time ACER published public consultations with conditional questions, ACER notes the observation and will strive to improve the survey tool, e.g. to enhance user friendliness.

Respondents' views	ACER response
<p>ACER and ENTSO-E should find the right balance between the benefit of including additional parameters/assumptions versus their costs/impacts, recognizing that the modelling exercise is a simplification of reality and it cannot cover all elements. It was suggested to engage in cost-benefit analyses of proposed sophistication of the approaches (1 respondent).</p> <p>Estimation of parameters (like VOLL, CONE, reliability standards) need to consider several assumptions about future conditions of the electricity market and the related uncertainty, especially taking into consideration a low-carbon economy endangered by the pandemic. Focus should be on being “roughly correct” rather than “precisely wrong”. It is suggested to consider the Pareto principle (“80/20 rule”) to focus on most important drivers (1 respondent).</p>	<p>ACER is aware of the complexity of the ERAA and VOLL/CONE/RS methodologies, and considers that a balance should be struck between level of detail and implementation feasibility. At the same time, ACER believes that the ERAA shall be realistic and shall fulfil all legal requirements, even in a simplified manner (during a transition period). ACER also recognises that future amendments should balance between the level of complexity introduced by innovation and the more realistic representation of the current and future market and, and strove to address this issue in the amended methodology.</p>
<p>ERAA should not be detrimental to NRAAs. Ensure a reasonable harmonization without being overly prescriptive because the methodologies' ultimate translation remaining a political choice for MS (1 respondent).</p>	<p>This view is not relevant for the VOLL/CONE/RS methodology. ACER's response is presented in Annex II of the Decision No ACER-ELE-2020-24/2020</p>
<p>Disagreement with the inclusion of RR in the adequacy assessment. following vote against the approval of the proposal of ERAA methodology within ENTSO-E (1 respondent, TSO).</p>	<p>This view is not relevant for the VOLL/CONE/RS methodology. ACER's response is presented in Annex II of the Decision No ACER-ELE-2020-24/2020</p>
<p>The ERAA Proposal lacks the level of ambition envisioned in the CEP, as well as in the EU Green Deal and the Climate Emergency declared by the European Parliament (1 respondent).</p>	<p>This view is not relevant for the VOLL/CONE/RS methodology. ACER's response is presented in Annex II of the Decision No ACER-ELE-2020-24/2020</p>

Respondents' views	ACER response
<p>A document comparing the two versions of the draft ERAA and VOLL/CONE/RS methodologies prepared by ENTSO-E (the draft methodologies dated on 5 December 2019, and the draft methodologies dated on 22 April 2020, which were submitted to ACER for approval) would have been useful for the purposes of facilitating the analysis by participants (1 respondent).</p>	<p>While ACER acknowledges that the publication of a comparative document of the two versions from ENTSO-E might have been useful for the purposes of facilitating the analysis by participants, it also observes that this goes beyond the requirements for ENTSO-E set by the Electricity Regulation.</p>
<p>The ERAA and VOLL/CONE/RS methodologies should mention specifically EU climate goals. Tight deadlines for CEP should not be an excuse for low quality methodologies. Allowing sufficient time should also guarantee compliance with access to information and public participation requirements as enshrined in the Aarhus Regulation. The pragmatic approach should not compromise quality and the need for an efficient and effective methodology to address the climate emergency (1 respondent).</p>	<p>ACER observes that the VOLL/CONE/RS methodology shall be consistent with the legal basis provided by Articles 11, 23(6), 23(7), 25 of the Electricity Regulation. In particular, future improvements of the methodological framework are allowed in line with Article 27(4) of the Electricity Regulation. Climate policies should be indirectly reflected in the CONE and RS calculations through the technologies, in line with Article 3 of ERAA methodology.</p>
<p>The ERAA methodology shall include a clear, explicit and robust ex-post monitoring mechanisms of the quality of its assumptions and output, based on the historical data which will be available in the future (1 respondent).</p>	<p>This view is not relevant for the VOLL/CONE/RS methodology. ACER's response is presented in Annex II of the Decision No ACER-ELE-2020-24/2020</p>

Respondents' views	ACER response
<p>On transparency: the ERAA proposal itself acknowledges that it is modular, will not be implemented in full and may not be fully compliant with the Electricity Regulation. Vague wording not specifying requirements for prioritizing implementation, legal validity, occurrence of a consultation process or capabilities in executing implementations steps. To avoid opaqueness and lack of transparency it would be sensible to add clauses regarding an explicit monitoring mechanism. The transparency principle can be guaranteed by applying the resource adequacy procedure decision making the Aarhus Convention (1 respondent).</p>	<p>This view is not relevant for the VOLL/CONE/RS methodology. ACER's response is presented in Annex II of the Decision No ACER-ELE-2020-24/2020</p>
<p>On energy solidarity principle: the ERAA methodology should be drafted in line with the principle of energy solidarity. The relevant decision-making bodies should draft the methodology in a way that reflects the solidarity principle establishing a robust and ambitious model that will guarantee security of supply for the benefit of the EU and MS (1 respondent).</p>	<p>This view is not relevant for the VOLL/CONE/RS methodology. ACER's response is presented in Annex II of the Decision No ACER-ELE-2020-24/2020</p>
<p>On energy efficiency first principle (EE1st). The EE 1st principle should be reflected in the different provisions of the ERAA methodology, given that the latter will be used when adopting investment decisions to decarbonise the energy system and secure supply of energy, by allocating financial resources through the confirmation that a CM is needed to address security of supply concerns. The current methodology is not consistent with the EE1st principle, because relevant parts that refer to demand response do not properly consider the opportunities that the latter offer to the energy system (1 respondent).</p>	<p>This view is not relevant for the VOLL/CONE/RS methodology. ACER's response is presented in Annex II of the Decision No ACER-ELE-2020-24/2020.</p>

Respondents' views	ACER response
Balancing reserves should be excluded from the base case assessments (2 respondents).	This view is not relevant for the VOLL/CONE/RS methodology. ACER's response is presented in Annex II of the Decision No ACER-ELE-2020-24/2020.
Climate change modelling is a complex exercise to be developed with climate and adequacy experts: before this is developed, climatic years should include extreme events and not based on set of most recent years. There shall be a consistent EU choice of climatic years and this shall be publicly consulted (2 respondents).	This view is not relevant for the VOLL/CONE/RS methodology. ACER's response is presented in Annex II of the Decision No ACER-ELE-2020-24/2020.
While not real, perfect foresight is a simplification, it should not be embedded in the methodology in case a model with imperfect foresight is developed (1 respondent).	This view is not relevant for the VOLL/CONE/RS methodology. ACER's response is presented in Annex II of the Decision No ACER-ELE-2020-24/2020.
Combined heat and power is a mature technology (in contrast with what was written by ENTSO-E) and the models should take into account the relevant constraints. This is particular relevant for DK. For the same reasons all cross-sectoral aspects (HP, P2X, etc.) should be taken into account by the model (1 respondent).	Pursuant to Article 23(5)(d) of the Electricity Regulation, ACER considers that, to ensure consistent scenarios, assumptions regarding all technologies (including combined heat and power) should rely on a "best forecast" approach.
Modelling framework should be coherent with market design and legally imposed implementations (1 respondent).	This view is not relevant for the VOLL/CONE/RS methodology. ACER's response is presented in Annex II of the Decision No ACER-ELE-2020-24/2020.

Respondents' views	ACER response
<p>EVA is a complex exercise, decision should not be exclusively based on a mathematical model, which is a tool supporting decisions. The model should include risk-aversion considerations to include the points of view of different market parties, also consulting the financial sector. MSs should provide input to the consultation on exogenous assumptions on capacity (2 respondents).</p>	<p>This view is not relevant for the VOLL/CONE/RS methodology. ACER's response is presented in Annex II of the Decision No ACER-ELE-2020-24/2020.</p>
<p>If any, price caps should be reflected in the ERAA modelling framework (1 respondent).</p>	<p>This view is not relevant for the VOLL/CONE/RS methodology. ACER's response is presented in Annex II of the Decision No ACER-ELE-2020-24/2020.</p>
<p>On transparency:</p> <p>a. ENTSO-E should publish relevant data influencing adequacy on generation, (plant capacities, unit sizes), transmission (interconnector capacities), planned and unplanned outages by type and price zone for all relevant years, demand per type and price for all relevant years, TS for RES, demand, must-run profiles and areas not modelled. Transparency is vital when MSs run their own models for national and regional adequacy assessments. Confidentiality can be solved by anonymizing relevant data (1 respondent); and</p>	<p>This view is not relevant for the VOLL/CONE/RS methodology. ACER's response is presented in Annex II of the Decision No ACER-ELE-2020-24/2020.</p>

Respondents' views	ACER response
<p>b. ENTSO-E model should be publicly available with a description on how it works: this makes it easier for MSs running their assessments as well as research institutions. Tests of new features should be made publicly available. While one tool will be used, ENTSO-E should run analyses with additional tools (like in MAF) for comparison (1 respondent).</p>	
<p>On implementation: NRAA should follow the MAF/ERAA in force. The current point of reference for NRAA should be the latest MAF/ERAA report approved and published by ENTSO-E (1 respondent).</p>	<p>This view is not relevant for the VOLL/CONE/RS methodology. ACER's response is presented in Annex II of the Decision No ACER-ELE-2020-24/2020.</p>
<p>The RS cannot be calculated by a mere formula but MS should have freedom to set their own desired level of security of supply. There should be freedom for MSs to decide the parameters. It is suggested to have a public consultation of market participants with respect to the process defining the RS. Models and methodologies alone can never drive this political decision and they always have to be complemented by additional studies, qualitative assessment, policy statement, etc. The RS finally is a political choice by each MS (5 respondents).</p> <p>While leeway should be given to MSs in the definition of the RS, a certain level of harmonization at regional/EU level is necessary (1 respondent).</p>	<p>ACER highlights that the RS methodology focuses on the calculation of the RS pursuant to Article 23(6) and Article 25(2) of the Electricity Regulation. The RS is set by the Member States themselves pursuant to Article 25(2) of the Electricity Regulation. ACER stressed the fact the according to recital (46) of the Electricity Regulation Member States should have the freedom to set their own desired level of security of supply.</p>

Respondents' views	ACER response
<p>The list of reference technologies should be based on market signals. It is important to stress that capacity must be firm over potentially long period of stress events (e.g. several days) (1 respondent).</p>	<p>ACER considers that the first comment is addressed through the criteria for characterising a technology as reference technology in Article 10 of the VOLL/CONE/RS methodology.</p> <p>Regarding the second remark, ACER notes that it is addressed through the calculation of the de-rating factor taking into account expected characteristics of stress events.</p>
<p>The criteria for reference technologies envisaged in the VOLL/CONE/RS Proposal significantly reduce the number of technologies to be considered for calculation. Reference technologies should include technologies allowed to participate in a CM. The concept of CORP could mitigate this issue (1 respondent).</p>	<p>ACER proposes to reduce the scope of criteria to define reference technologies. ACER also considers that all reference technologies, including renewal/prolongation, shall be considered on an equal footing in the RS methodology.</p>
<p>It is important to properly consider DSR in CONE calculation (1 respondent).</p>	<p>ACER agrees with the comment.</p>
<p>A MS should be responsible for evaluation of all types of surveys (carried out using the willingness-to-pay, willingness-to-accept or direct worth method) and for determining sectoral VOLLs. Supports leaving freedom to MS to apply the preferred method (3 respondents).</p>	<p>Pursuant to the definition of VOLL in Article 2(9) of the Electricity Regulation, the willingness to pay best fits the legal requirements. However, ACER believes that complementary cost-estimation methods may be used if they are considered to lead to more robust VOLL estimates.</p>
<p>The use of contingency valuation method for VOLL surveys is supported.(1 respondent)</p>	<p>Pursuant to Article 11(1) of Electricity Regulation, regulatory authorities (or another entity designated by MSs) shall estimate the single VOLL for RS.</p>
<p>Implementation of pre-notification should be voluntary (if not correctly implemented it may increase costs for final costumers) (1 respondent).</p>	<p>ACER believes that pre-notification may significantly impact the VOLL by consumers and therefore suggests that variants that include pre-notification be included in the questionnaire of the</p>

Respondents' views	ACER response
	survey. However, the calculation of the single VOLL for RS shall reflect expected load-shedding conditions, to ensure realistic values.
<p>All sectoral VOLLs should be considered because all customers are affected by an electricity crisis. Any proposal that leads to decide in which order final customers will be cut off are unacceptable. MSs should be able to modify weights on sectoral VOLLs. Assuming that the weights would be determined only on the volume of the peak energy consumption for each group, the results of the estimated VOLL would not take into account the manual load-shedding framework (1 respondent).</p>	<p>ACER considers that the VOLL for RS shall be consistent with the manual load-shedding framework expected to apply. This manual load-shedding framework shall align with Article 11(6) of the Emergency and Restoration Regulation (including economic efficiency).</p> <p>To ensure consistency with the RS methodology, the VOLL for RS should ideally reflect the marginal reduction of EENS that additional capacity resources would cause. However, in view of the difficulties in calculating the single VOLL based on the aforementioned principle, simplified approaches may also be used.</p>
<p>The calculation of final VOLL must reflect reality of load-shedding plans currently implemented at MS level. The final methodology should be as close as possible to the submitted proposal. Therefore amendment that will propose the activation of manual load shedding plans targeting only specific costumer sectors, as a structural measure to cope with adequacy crisis should not be considered. (1 respondent).</p>	<p>Finally, pursuant to Article 11(1) of Electricity Regulation, regulatory authorities (or another entity designated by MSs) shall estimate the single VOLL for RS.</p>
<p>Economic load-shedding is technically and politically infeasible (1 respondent).</p>	