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Thursday, 30 January 2020

Mr John Pierce
Chairman
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Dear Mr Pierce

RE: ERC0283 – Victorian Jurisdictional Derogation - RERT Contracting

ERM Power Limited (ERM Power) welcomes the opportunity to provide this Submission to the Australian Energy Market Commission's (the Commission) Draft Determination to the rule change request submitted by the Victorian Government (the Proponent) for Victorian Jurisdictional Derogation – Reliability and Emergency Reserve Trader (RERT) Contracting.

About ERM Power

ERM Power (ERM) is a subsidiary of Shell Energy Australia Pty Ltd (Shell Energy). ERM is one of Australia's leading commercial and industrial electricity retailers, providing large businesses with end to end energy management, from electricity retailing to integrated solutions that improve energy productivity. Market-leading customer satisfaction has fuelled ERM Power's growth, and today the Company is the second largest electricity provider to commercial businesses and industrials in Australia by load¹. ERM also operates 662 megawatts of low emission, gas-fired peaking power stations in Western Australia and Queensland, supporting the industry's transition to renewables.

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General comments

ERM Power remains concerned that this rule change if implemented, will result in significant additional and potentially unnecessary costs being imposed on consumers at a time when energy users are already struggling with high energy costs. We believe the potential impact of additional costs on consumers should receive the highest consideration by the Commission as part of the rule change process.

We acknowledge the detailed work undertaken and the careful considerations given by the Commission to this rule change request as detailed in the Draft Determination. Whilst we support the Commission's view that the more preferable rule as set out in the Draft Determination is an improvement on the Proponent's rule change request, we remain unconvinced that the rule change is needed. If the Commission believes that a rule change is warranted, we believe there are additional changes which could be made to improve the proposed rule change from a consumer's best interests' perspective. These suggested improvements are set out in further detail in our submission.

¹ Based on ERM Power analysis of latest published information.



We note that the Draft Determination, in considering the rule change request, relies heavily on a view that there is a reasonable probability that the Victorian region may experience supply reliability issues under some extreme weather events and very low probability power system conditions. However, based on evidence presented to date, both in the Draft Determination and in the Australian Energy Market Operator's (AEMO) various reliability forecasting reports, it is unclear to ERM Power that this is "reasonably probable" under all except a combination of simultaneously occurring multiple low probability extreme events which could exist for a limited time period only. We believe that the interests of consumers would be best served where such a low probability event occurred would be more efficiently dealt with by short and medium notice RERT, rather than expensive multi-year duration long-notice RERT contracts.

Forecast of potential future Victorian region reliability issues

The Commission's reasoning as set out in the Draft Determination relies heavily on a view of potential future reliability issues in the Victorian region, based on AEMO's information provided to the Consultation Paper and privately to the Commission. We note that the current assessment of reliability for the Victorian region is set out in the 2019 Electricity Statement of Opportunities (ESOO), the 2019 Energy Adequacy Assessment Projection (EAAP) and the weekly updated Medium Term Projected Assessment of System Adequacy (MT PASA). None of these reports indicate a Low Reserve Condition (LRC) for the Victorian region during the period 2020 to 2026, the period covered by this rule change proposal. We note the following points from the Draft Determination and provide additional comments regarding these.

- "In addition, the Commission notes that unlike the ESOO, the EAAP does not factor unplanned generator outages into its forecasts. AEMO notes in the EAAP that generating units returning to service can, on occasion, require an extended re-commissioning process to ensure sufficient levels of control, stability and reliability are established."²

AEMO's current EAAP Guidelines - Version 1.4 issued 26 October 2016 Section 5.2.1 indicates that generator MT PASA submissions and generator forced outage rates are an input assumption for modelling of generating plant for EAAP. We understand that the same methodology and inputs assumptions for modelling simulated generator forced outages in the ESOO and MT PASA is used in the EAAP.

We agree that units returning to service from lengthy outages where significant plant upgrades, such as control system replacements and plant areas that may require performance standard testing, may require lengthy recommissioning periods, however we question the view that units returning to service from a lengthy normal maintenance outage or even a lengthy unplanned outage are subject to lengthy recommissioning periods. It should also be noted that where major upgrade outages are planned, the recommissioning period is normally included in the generating unit's MTPASA submission and is therefore included in AEMO's weekly MT PASA reliability assessment and any EAAP assessment that covers that period.

We also submit the following facts for the Commission's information;

Public data for Mortlake 2 post return to service from its lengthy unplanned outage during 2019 indicates that Mortlake 2 achieved full load within 60 minutes of initial resynchronising to the power system.

Public data for Loy Yang A2 post return to service from its lengthy unplanned outage during 2019 indicates that Loy Yang A2 achieved 80% load within 90 minutes and full load within 36 hours of initial resynchronising to the power system.

² Page 40 Draft Determination Victorian Jurisdictional Derogation - RERT Contracting



- “The AER has recently presented data on the supply-demand balance in each region of the NEM. The data and analysis presented by the AER indicates that the exit of thermal plant has led to a tightening in the peak demand-supply balance since 2012 in all NEM regions, with excess capacity halving in this time (Figure 3.3)”.³

It should be noted that the AER analysis requires use of AEMO’s 10% probability of exceedance (POE) demand forecasts to calculate the level of available reserves. As noted by the Commission during the Reliability Frameworks Review, AEMO demand forecasts tend to err towards conservative estimates. The Market Operators 10% POE Summer maximum demand forecast for the Victorian has never been exceeded in the 20 year history of the NEM. Conversely, maximum demand has fallen below the 90% POE forecast for 25% of years and this figure would be 35% absent a 6% widening of the gap between the 10 and 90% POE forecasts from the 2011 ESOO.

- The Commission recognises that a particular concern in relation to power system reliability is where outages are unplanned. These are harder to forecast; and, in addition, as AEMO has highlighted in the ESOO, tend to be caused by extreme high temperatures (which given the increased demand arising in this time, is when the resources are needed).⁴

Despite requests to AEMO to provide data regarding the increased probability of failure during periods of high temperature to support this assertion in the ESOO, no data has as yet been provided. Therefore, we question the acceptance of this assertion as “fact”, absent analysis. Generating unit derating may occur during periods of high temperature but this is already catered for in generating units MT PASA submissions. Also, as AEMO uses ‘max availability’ as opposed to ‘PASA availability’ in some unit availability analysis, units which remain ‘PASA available’ but not ‘max available’ due to the prevailing supply and demand conditions are considered by AEMO to be unavailable. This may lead to an incorrect view that generating unit availability is lower during summer periods as underlying demand is also lower in the summer months.

- As noted by AEMO the vulnerability of a power system to high temperatures is a key driver of probability of reliability standard exceedance. According to AEMO, the effect of potential heatwaves and high temperatures is likely to make USE probability distributions more ‘fat tailed’ (or, in AEMO’s phrasing, increased ‘tail risk’), as heatwave-induced extreme load shedding becomes more probable.⁵

In considering the probability of tail-risk and the potential for loss of load to exceed the reliability standard, it is unclear if the data as set out in Figure 4.5, which was extracted from the 2019 ESOO, contains the full range of potential outcomes, (10, 50 and 90% POE demand scenarios) or only those associated with 10% POE demand forecasts. Data contained within the weekly MT PASA outputs suggest the figure may only contain outcomes associated with the 10% POE forecast. From a statistical accuracy perspective these would then need to be weighted from a probability of occurrence basis.

- The upcoming closure of Liddell power station in 2022-2023 is said to represent “the next significant danger period for the Victorian supply reliability beyond the current forecast of shortfall and the coming online of new generation.”⁶

When considering the question of the impact of the closure of Liddell after the summer of 2022/23 on supply reliability in the Victorian region, we believe that the Commission should more carefully consider the impact of network congestion in northern Victoria and southern NSW at times of high Victorian demand.

³ Page 41 Draft Determination Victorian Jurisdictional Derogation - RERT Contracting

⁴ Page 45 Draft Determination Victorian Jurisdictional Derogation - RERT Contracting

⁵ Page 46 and Figure 4.5 Draft Determination Victorian Jurisdictional Derogation - RERT Contracting

⁶ Page 31 Draft Determination Victorian Jurisdictional Derogation - RERT Contracting



Historically, the NSW to Victoria directional interconnector transfer capability (VNI import limit) at times of high Victorian demand is normally close to zero MW due to high output from the Murray and AGL Southern Hydro generating units in northern Victoria and limited network transfer capacity between northern Victoria and Melbourne. Based on this, we believe the retirement of Liddell will have minimal if any impact on supply reliability in Victoria.

Length for which the Victorian RERT derogation will apply

The Commission has acknowledged in the Draft Determination the interaction of the proposed rule change with the Retailer Reliability Obligation (RRO). The first year for which AEMO could request a T-3 reliability instrument is 2023/24, based on outcomes determined in the 2020 ESOO reliability forecast.

“As discussed in section 2.2.4 of this draft rule determination, the RRO can only be triggered three years out of a forecast shortfall. Should the circumstances facing Victoria in the coming few years deteriorate such that the reliability standard were forecast to be breached, they cannot be addressed under the RRO. The next summer that the RRO can be utilised to address a reliability shortfall in Victoria and any other NEM region is the summer of 2023 -2024 (based on the ESOO triggering a T-3 event in 2020).”⁷

We agree with the Commissions considerations regarding this. The RRO was established to ensure that where AEMO identifies a potential reliability gap a framework is activated that promotes the contracting of firm supply sources by market customers (retailers and large directly supplied loads), to remove this potential reliability gap prior to AEMO completing its T-1 reliability assessment. The RRO even includes contract firmness requirements that discounts contracts with supply or demand side resources that are demonstrated, based on historical outcomes, to be less firm at times of high regional demand, and promotes contracting with firm supply or demand response resources.

In our view it is critical that RERT contracting activities by AEMO must not be allowed to interfere with market customer contracting in the T-3 to T-1 time period. We believe, if a T-3 reliability instrument is triggered, then market frameworks must provide priority to allowing the reliability gap to be removed by ‘in-market’ resources. We believe that this will ensure the lowest costs to consumers over the long term. Currently, the proposed rule would allow AEMO to directly compete during a future T-3 to T-1 time period for supply or demand response resources with market customers. Further it could divert capital funding away from the provision of in-market services to out-of-market services, due to AEMO’s ability under this proposed RERT derogation to offer significant availability payments as well as dispatch activation payments which are a multiple of the market price cap on which the rate of return for in-market services may be calculated. This potential for diversion of capital funds away from in-market services was not considered as one of the potential market distortionary impacts in the Draft Determination but could significantly impact the costs of procurement to retailers and market customers, (and by extension, consumers), in fulfilling their RRO compliance obligations. It should also be noted that this diversion of capital funding may not be restricted only to the Victorian region, capital funding may also be diverted from other regions due to the higher financial reward on offer by AEMO under this proposed multi-year RERT contracting framework.

In addition, we believe the more preferable draft rule has the potential to delay the initial development of a two-sided market framework, such as that detailed in the Commission’s Wholesale Demand Response Mechanism Draft Determination (WDRM). In general, ERM Power was supportive of the proposed WDRM rule changes in facilitating the initial delivery of a two-sided market framework and believe it would be a poor outcome if the initial development phase of this important market framework improvement was delayed or impacted due to implementation of this rule change which would allow multi-year long-notice RERT contracts to extend well into the period where the proposed WDRM may well be active.

⁷ Page 48 Draft Determination Victorian Jurisdictional Derogation - RERT Contracting



The draft rule proposes that the derogation be in place for approximately three years, rather than five as proposed by the Victorian Government, and end on 30 June 2023. However, the draft rule allows the signing of three year RERT contracts until 30 June 2023 which allows the duration of any contract to extend until 30 June 2026, well into the time period covered by the RRO framework, and therefore has the potential to place AEMO in direct competition with market customers for supply and demand side resources. The Commission acknowledged this threat of competition from AEMO to market customers in meeting their obligations to the RRO in the Draft Determination and made a specific attempt to remove this by shortening the time period for which the derogation would apply.

“Furthermore, the ability of AEMO to enter into multi-year contracts should end prior to the time at which, were the RRO to be triggered, retailers would be required to enter into contracts to meet their share of expected system peak demand. Otherwise, the time-frame would overlap with the obligations and incentives market participants face under the RRO. If this were to occur it would diminish the incentives for liable entities to contract under the RRO in Victoria since AEMO would also be in the market at the same time procuring three year RERT contracts.

Therefore, the Commission considers that the ability of AEMO to enter into multi-year contracts in Victoria under the derogation should end in June 2023 (running for three years rather than five), as shown in the following figure.”⁸

We are not sure that the proposed draft rule achieves this objective as it allows three-year RERT contracts to remain in effect until 30 June 2026. As an alternative, we propose that the duration of any contracts signed under this RERT derogation be required to terminate by 30 June 2023, after which any forecast of a potential reliability gap will be adequately dealt with by the provisions of the RRO, absent interference from long duration RERT contracting by AEMO. This alternative is set out in more detail below;

If the 2020 ES00 shows a RERT requirement in 2020-21 and a T-3 shortfall for 2023/24 (confirmed by the AER) then,

- AEMO can enter RERT contracts of up to 3 years duration (2020-21, 2021-22 and 2022-23)
- Retailers can procure contracts to meet their 2023-24 obligation without competition from AEMO

If the 2021 ES00 shows a RERT requirement in 2021-22 and a T-3 shortfall for 2024/25 (confirmed by the AER) then,

- AEMO can enter RERT contracts of up to 2 years duration (2021-22 and 2022-23)
- Retailers can procure contracts to meet their 2023-24 and 2024-25 obligations without competition from AEMO

If the 2022 ES00 shows a RERT requirement in 2022-23 and a T-3 shortfall for 2025/26 (confirmed by the AER) then,

- AEMO can enter RERT contracts covering up to 1 year (2022-23)
- Retailers can procure contracts to meet their 2023-24, 2024-25 and 2025-26 obligations without competition from AEMO

⁸ Page 73 Draft Determination Victorian Jurisdictional Derogation - RERT Contracting



We believe amending the proposed draft rule so that any multi-year RERT contract must terminate by 30 June 2023 achieves the aim of the Victorian Government rule change request to have in place an extended RERT contract framework for AEMO to use prior to the next update of the ESOO and remove any overlap with the obligations and incentives market participants face under the RRO.

Multi-year contracting trigger and costs

The Commission has indicated that the trigger for entering into multi-year contracts will be the same as that for existing long-notice RERT contracts.

“The draft rule does not specify a different trigger for entering into long notice RERT contracts, meaning the trigger specified under the enhancement to the RERT rule will also be applicable for multi-year reserve contracts under the derogation. The trigger is therefore, a Low Reserve Condition (LRC) declaration by AEMO for a period within the coming 12 months. This trigger is not required to be met in years 2 and 3 of the contract.”⁹

The Commission also indicates that;

“This still affords AEMO discretion as to the length of the contract required, but does make it clear that, where reserves are expected to be required for a period of less than three years, then the contract term should be for the lesser period.”¹⁰

We are concerned that these requirements are less clear than what is required to provide AEMO adequate guidance with regards to an appropriate contract term. The proposed draft rules as written could reasonably be determined that from the lack of a declared Low Reserve Condition (LRC) in years 2 and 3, reserves are not expected to be required in years 2 and 3 and therefore the most appropriate contract term is 12 months. However, the proposed draft rules allow AEMO to ignore the absence of a declared LRC in years 2 and 3 and sign up to a three-year contract at potentially higher overall costs to consumers. We believe the lack of clarity in the area should be addressed.

We believe the final rule should clearly state that the period covered by a multi-year RERT contract should be supported by a declared LRC condition in each of the twelve-month periods. This requirement will be further supported by the proposed change to extend the MT PASA from a 24 four to 36 month period which most market participants indicate¹¹ provides a more granular, accurate and frequently updated source of future supply reliability than the ESOO. Further, we believe that where the LRC exists for only a short time frame, particularly where any forecast reliability gap is only relatively small, this would be more efficiently managed by the use of medium or short-notice RERT panels. This will ensure that consumers are not burdened with unnecessary long-notice RERT availability charges.

We note the Commission inclusion in the Draft Determination that the volume of medium and short notice RERT engaged for the 2019/20 summer was significant:

“AEMO has also received expressions of interest in more than 1,000 MW of short and medium-notice RERT panel agreements in Victoria and South Australia, which will be available to cover risks associated with extreme system scenarios. This is a significant component of the total 1,500 MW of emergency reserves across the NEM for which it has received expressions of interest. In addition, AEMO noted that negotiations for short and medium-notice RERT are continuing, and the final amounts accessible under panel agreements will be published by AEMO in accordance with the RERT Guidelines.”¹²

⁹ Page 23 Draft Determination Victorian Jurisdictional Derogation - RERT Contracting

¹⁰ Page 23 Draft Determination Victorian Jurisdictional Derogation - RERT Contracting

¹¹ As indicated by submissions to the Improving transparency and extending duration of the MT PASA rule change Consultation Paper and Draft determination

¹² Page 39 Draft Determination Victorian Jurisdictional Derogation - RERT Contracting



This flexibility provided to AEMO in RERT contracting options supports our view that in some cases, forecasts of a potential LRC is best managed by the efficient use on medium or short notice RERT contracts rather than the signing of higher cost long-notice RERT contracts which ultimately may not be required. The use of short and medium notice RERT contracts ensures that consumers are not burdened by unnecessary RERT costs as costs are only incurred by consumers on an “as required” basis.

We also believe the Commission should give consideration to the efficient management of reserve shortfalls in New South Wales on 4 and 23 January this year, where network outages prevented output from generators in the south of the state supplying the major demand centres in central NSW, combined with generating plant unplanned outages and low variable renewable energy output, by the use of short-notice RERT contracts. This outcome ensured that only the efficient costs of RERT “as dispatched” was paid for by consumers on an “as required” basis.

We note the Commission views that a long-notice RERT contract of 12 months could be considered an insufficient timeframe to efficiently spread the capital expenditure required, resulting in high per unit costs in the RERT contract awarded.

“The Commission considers that spreading upfront costs over three years under a multi-year contract could result in lower direct costs than under one-year contracts. Potential RERT providers have commented that multi-year contracting under the proposed derogation would allow them to spread their one-off fixed costs over a longer period which means they will be able to offer RERT at a lower per unit cost.

Therefore, the Commission considers that multi-year contracting could provide for cheaper contracts for emergency reserves on a per unit basis (defined as \$/MW/year) through lower availability charges per year, but only if there is a reasonable likelihood of the need for procuring RERT contracts beyond year one.”¹³

To ensure that consumers only incur the efficient costs associated with such expenditure, we believe the final rule should contain a provision that the cost of any availability or facility fees for a multi-year contract must be less than or equal to these costs for a twelve-month contract, otherwise there would be no savings to consumers from multi-year contracting. We believe it is the total costs to consumers overall that must be considered, not just a yearly per MW provision cost.

From a perspective of assessing indirect costs, the Commission also considered the type of generation that would, in the Commission view, be more likely to participate in a multi-year long-notice RERT would be unlikely to participate in the provision of in-market services.

“Diesel generation sets could be expected to provide emergency reserves fairly easily, but that they would not necessarily have the characteristics to operate in the market on an enduring basis. The Commission notes that this is supported by there being a relatively small amount of diesel fuelled scheduled generation in market, with none registered in the Victorian market. This could further minimise indirect costs”.¹⁴

This view was supported by AEMO in a confidential submission to the Commission.

“Having regard to confidential information provided by AEMO, the Commission considers that the type of resource providers that would become more cost competitive if multi-year contracts were offered under the RERT would be unlikely to participate in the market because they would be largely supply-side. This is consistent with information that the Victorian Government included in its derogation request. It is also supported by AEMO's view in its submission to the consultation paper where it noted that RERT providers that participate in the long-notice RERT are unlikely, for various reasons, to participate as a market

¹³ Page 56 Draft Determination Victorian Jurisdictional Derogation - RERT Contracting

¹⁴ Page 69 Draft Determination Victorian Jurisdictional Derogation - RERT Contracting



participant in the NEM. Therefore, AEMO considers that having the flexibility to procure long-notice RERT over multiple years would not result in indirect costs to the wholesale electricity market.”¹⁵

ERM Power has significant experience in the provision of new generating units to the National Electricity Market (NEM), both directly and through the purchase of forward dated contracts to support investment by other participants. We continuously review the types of supply side resources that would best serve the interests of both ourselves and our customers in the future, taking into account changes in the market such as the increasing penetration of intermittent renewable energy generators and the expected impact of the change to five-minute settlement from 1 July 2021.

Fast starting aero-derivative gas turbines cannot start and achieve full load as quickly as reciprocating engine generators and are unable to achieve little in the way of average output for settlement purposes over a five-minute settlement period. Diesel or gas fuelled reciprocating engines can provide cost effective back up services for intermittent generators or for unplanned outages of other generating plant on a continuous basis and are not subject to the same energy limitations as battery energy storage systems.

This is further supported by the ongoing tightness of supply for gas to fuel gas fired generation in the NEM and noting that the last dispatchable generating capacity added to the NEM was reciprocating engines at Barker Inlet in South Australia which is capable of operating on either gas or diesel. Whilst the Commission notes that currently no diesel only fuelled generation is installed in the Victorian region, there is a large number of generating units in the Victorian region with the capability to operate on gas or diesel on an “as required” basis.

We believe that the Commission assumption regarding the use of fast starting diesel or gas fuelled reciprocating engine generators for the provision of ‘in-market services’ is incorrect. Fast starting diesel or gas fuelled reciprocating engine generators of small to medium capacity operating in banks of multiple units may potentially meet the future requirement of a market that requires flexible plant operation as dispatchable back up supply resources to intermittent generation and for the change to five-minute settlement.

Transparency and reporting requirements

We support the Commission’s proposed inclusion of additional reporting requirements for multi-year RERT contracting, noting that it is consumers who will ultimately incur these increased costs.

The inclusion of specific, after the event reporting requirements is in this case intended to provide some level of confidence to consumers that AEMO has acted in their best interests, noting that the AEMO in effect has a unilateral decision making right with regards to both the time duration and volume procured under a RERT contract. However, we are concerned that there is no independent scrutiny on behalf of consumers that AEMO’s RERT contracting decisions align with an outcome that consumers support. Should consumers disagree with AEMO’s actions, there is currently no framework for consumers to alter AEMO’s actions, either in the present, or in the future, absent a lengthy rule change process.

Improved oversight is also required. We believe that prior to entering into a multi-year long-notice RERT contract, AEMO should be required to provide all information relevant to entering into a proposed multi-year long-notice RERT contract to the Australian Energy Regulator (AER) for review and approval. The AER currently acts as an independent safeguard to ensure that only efficient costs are allocated to consumers in many areas of the National Electricity and Gas Markets. We see a role of review over AEMO’s multi-year long-notice RERT contracting decisions as a process that will instill confidence in consumers that an independent review of AEMO’s decision criteria has been made on behalf of consumers, noting that at this stage information regarding the proposed contract will be subject to commercial-in-confidence provisions and therefore not able to be disclosed to consumers.

¹⁵ Page 69 Draft Determination Victorian Jurisdictional Derogation - RERT Contracting



We believe that this independent review process will provide greater confidence to consumers that only efficient RERT contracting costs are passed through to consumers.

Conclusions

We believe greater consideration regarding the incurring of only efficient costs to consumers should be applied when determining this rule change request. Consumers after all are the ones who will incur the full costs of AEMO's actions.

Whilst we are supportive of the more preferable rule as set out in the Draft Determination, compared to the rule change request, we believe additional improvements are warranted and to this end have provided suggested additional changes to the proposed Draft Rules.

We believe improved clarity for the operation of the proposed Draft Rules is required to ensure that when multiyear long-notice RERT contracts are procured, the duration and volume procured is not in excess of that required to meet any forecast potential reserve shortfall (LRC) at least direct cost to consumers.

We have suggested improvements that we believe are in the best interests of consumers with regards to minimising the direct and indirect costs of any RERT procurement by preventing overlap between AEMO's multi-year long-notice RERT contracting activities and any market customer contracting activity associated with the declaration of a T-3 reliability instrument.

From a governance perspective, we have suggested an improvement to increase consumer confidence so that any actions with regards to multi-year RERT procurement have been subject to independent review and not reliant on a unilateral decision process.

We believe that the proposed changes to the Draft Determination as set out in our submission will allow AEMO the flexibility to achieve the stated aims of the rule change request whilst providing an improved framework to provide improved confidence to consumers that all additional costs incurred are in consumers best interests.

Please contact me if you would like to discuss this submission further.

Yours sincerely

[signed]

David Guiver

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