

**Training Workshop on the Segregation of System Losses
and the Establishment of Caps on Recoverable Rate of Distribution System Losses**

Comments on the Guidelines

<i>Topic/Issue</i>	<i>Comments</i>
System Loss Cap	<ul style="list-style-type: none"> ▪ How often will the cap be set? Will the ERC annually set the cap? ▪ Will there be a cap for each utility, or will a cap be established for pre-defined group of utilities? ▪ If two neighboring utilities are assigned different system loss caps, how do we explain that to the customers? ▪ Will the cap be a single number, or will it be more flexible, say a <i>range</i> of values for each group? ▪ Will there be benefits if the performance is better than the cap? (just as there are penalties if the efficiency is worse than the cap) ▪ Will the rates automatically follow (increase or decrease) after the establishment of caps? ▪ How will our submission be checked? ▪ Is it okay if the utility does not file for lower cap? ▪ How about setting a cap only on the Non-technical loss and not anymore on the technical loss. We can instead monitor compliance to the voltage quality, wherein excessive technical losses leads to greater voltage quality problems/violations. ▪ Why are the caps on Technical and Non-Technical Losses in percentage, while the cap on the Administrative Loss is in KWhr? ▪ Can the Distribution Utility include load growth, planned network changes and development in calculating the cap?
Administrative Loss	<ul style="list-style-type: none"> ▪ Can we use another term for this? (e.g. Administrative Use or Allowance) ▪ Do we need to account for all offices, including those outside the franchise area? ▪ What are examples of <i>community-related activities</i>?

Administrative Loss (continuation)	<ul style="list-style-type: none"> ▪ Can <i>energy allowance</i> given to employees be considered Administrative Loss? ▪ How about the energy consumed in the General Manager's residence? ▪ Should we meter streetlights? ▪ We recommend that "<i>grant of energy under threat</i>" be included as Administrative Loss. ▪ Can we include as Administrative Loss those technical losses (DT and lines) related to delivery of power to Administrative loads. ▪ Is it okay if it turns out that the Administrative Loss exceeds the current limit of 1%? ▪ Since Administrative Loads are metered anyway, do we still need to set a cap?
Recovered Energy	<ul style="list-style-type: none"> ▪ When should the Distribution Utility report <i>Recovered Energy</i>? Is it as soon as it is discovered or after the payment has been collected? ▪ <i>Perang gagastusin sa abogado ay masyadong malaki, kaya ina-areglo na lang.</i> ▪ Where do we account for recovered energy: before the net energy input or before the net non-technical losses? ▪ Do we differentiate between recovered energy through amicable settlements from litigation? After the next billing recovered energy is also reflected in the meter.
Costs	<ul style="list-style-type: none"> ▪ How can we recover costs incurred in anti-pilferage operations? ▪ Can the cost associated with this segregation of system losses be charges against the Reinvestment fund? ▪ Since Right of Way clearing is intended for system loss reduction, can we recover the cost?
Date	<ul style="list-style-type: none"> ▪ Can we consolidate the 2003 data instead of the 2002 data (as specified in the guideline)? But the 5 year historical data remains from 1998-2002.
Submission of Petition	<ul style="list-style-type: none"> ▪ Do we need to submit a hardcopy of the data (it will take 4000++ pages)?

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Comments on the Methodology

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Methodology	<ul style="list-style-type: none"> ▪ We acknowledge that this proposed methodology is scientific but there could be other scientific methods that can be used. ▪ How accurate could this procedure be considering that there could be inaccuracies in the load. How will errors in the load models propagate to the rest of the analysis? ▪ As consumers, we appreciate this systematic procedure of quantifying losses. ▪ A large utility may need 8 years to do this methodology. ▪ A cooperative in Mindanao requests 6 months to gather data. ▪ A cooperative in Northern Luzon estimates a lead time of 2 years to finish this. ▪ ERC should give utilities ample time for data gathering ▪ With this methodology, it can be expected that Technical Losses will go down, and Non-Technical Losses will go up. But no one will want to take on that. ▪ With this methodology, a utility now has the opportunity to bring down the losses. ▪ For the three-stage approach, can we use feeder metering? ▪ When this methodology was first conceptualized, what was your initial estimate for success? ▪ Do you think it is appropriate to trust the tools? ▪ As a private utility, we would like to clarify the (mis)impression that we are not supportive of this methodology. If you are saying that we can do initial estimate, then we can do that. ▪ Is the utility required to explain its methodology and data collection to the ERC?
Non Technical Losses	<ul style="list-style-type: none"> ▪ How do we account for the Non-technical losses in the insulators, especially aged/faulty insulations? ▪ How about losses due to splice, loose connection, and hotspot? ▪ Is there a way to segregate further the Non-Technical Losses?

Non Technical Losses (continuation)	<ul style="list-style-type: none"> ▪ Can we use heat energy measurements (through thermal scanning) for non-technical loss calculation? ▪ Where do we account for the losses in the meters, and in voltage and current transformers? ▪ Why is it that inherent meter loss is included as Non-Technical loss instead of Technical Loss? ▪ Do we have to remove no-load loss passed to customers connected from dedicated transformers?
Technical Loss	<ul style="list-style-type: none"> ▪ How do we account for Technical Loss due to Non Technical Loss? ▪ What if the calculated Technical Loss is greater than total System Loss? ▪ Will we further breakdown technical loss according to customer type? ▪ Our software does not consider capacitor losses, can we resort to energy audit? ▪ Can we include the burden of the meter in the calculation of losses?
Percentage Technical and Non-Technical Loss	<ul style="list-style-type: none"> ▪ Are there ideal values (percentages) for the technical and non-technical losses?
Allocation of Losses	<ul style="list-style-type: none"> ▪ How do we allocate core losses to various customers connected to the same transformer, considering that they do not have the same transformer utilization? ▪ Will we perform nodal cost computation?
Pilot Utilities	<ul style="list-style-type: none"> ▪ The pilot utilities should solicit suggestions from and share capabilities with neighboring utilities. ▪ <i>Bakit Class A lang ang pinili, di ba dapt pumili from Class E para "well-represented"?</i> ▪ To be included in the advanced computations do we need to submit all data for all substations?
Billing Cycle	<ul style="list-style-type: none"> ▪ How do we account for the difference between TRANSCO's and the utilities' billing cycles? ▪ How do we account for the different meter reading schedules within the utility?
Loads	<ul style="list-style-type: none"> ▪ Is flat rate billing method applicable to loss calculation? ▪ Should we meter streetlights and small customers such as house of tender for repeater station? ▪ Isn't it that there is quadratic relationship between loads and losses? ▪ We have problem with large loads with seasonal operations.

Distribution System within Distribution System	<ul style="list-style-type: none">▪ How will the utility account for BAPA connections?
Uncollected Bills	<ul style="list-style-type: none">▪ Where do we take that into account?
Customer Classes	<ul style="list-style-type: none">▪ Do we classify customers in terms of service voltage?
Service Entrance	<ul style="list-style-type: none">▪ How do we treat the point of connection from the service drop tapping of service entrance up to the terminal connection of the KWHr meter?

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Comments on the Templates

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Data Collection	<ul style="list-style-type: none"> ▪ Do we measure each conductor length? ▪ How about old equipment without available data? ▪ Can we use NEA data? ▪ We cannot completely eliminate "<i>gestimates</i>" especially in the power factor of residential customers ▪ Can we use "standard values" for transformer load and no-load losses? ▪ With the large data collection requirements, <i>baka ito na lang ang ginagawa namin?</i>
Customer Data ERC-DSL-02	<ul style="list-style-type: none"> ▪ Can we use Connection ID instead of Customer ID?
KWHR Reading Meter Reading Data ERC-DSL-03	<ul style="list-style-type: none"> ▪ Please clarify: does it refer to the actual reading or the energy consumed (i.e. difference between successive readings) ▪ What is the format for the power factor? We suggest in decimal instead of percentage ▪ Billing Period: Can we instead divide the number of days in the year by 12? ▪ Some utilities normalize the billing period in order to take into account the discrepancy in the billing cycles.
Load Curves ERC-DSL-04	<ul style="list-style-type: none"> ▪ Is load curve necessary for every customer? ▪ Can we use the load profile in the substation since we know that it delivers power to a purely residential area? ▪ Do we have to use statistical analysis in determining sample size? ▪ If we can profile the real demand, why not do the same for reactive demand? ▪ We monitored the load continuously for three straight weeks, which one will we use: the peak for every interval or the average?

Customer Type ERC-DSL-01 and 04	<ul style="list-style-type: none"> ▪ Should it be not the same as the customer classifications used in the rate unbundling?
Bus Data ERC-DSL-05	<ul style="list-style-type: none"> ▪ Is Bus ID same as pole number? ▪ Is there a preferred method for bus numbering?
Total Substation Capacity	<ul style="list-style-type: none"> ▪ Some utilities have multiple voltage transformation. This may lead to redundant accounting of capacity
Line Data	<ul style="list-style-type: none"> ▪ How do we compare Circuit length with Conductor Length? ▪ Should we take into account the sag and the variations in the terrain? ▪ What is the difference between the PI model and the T model for the transmission lines? ▪ Since the distribution lines are shorter than 70 km, can we neglect the shunt elements in the model? ▪ Will ERC specify a standard phasing for the lines? ▪ Does the use of steel poles have any effect on the line models?
Service Drop ERC-DSL-15	<ul style="list-style-type: none"> ▪ What will be the service drop identification for clustered metering ▪ How do we indicate a service drop connected to another service drop? ▪ How do we indicate "triplex wire"?
Generator Data	<ul style="list-style-type: none"> ▪ Please include models for generators ▪ We have generators running during interruptions, how do we account for that?
Grounding Transformer	<ul style="list-style-type: none"> ▪ Is it transformer data or voltage regulator data?
Underground System	<ul style="list-style-type: none"> ▪ Please include underground primary model
Identification	<ul style="list-style-type: none"> ▪ Will the ERC provide a standard alphanumeric coding for equipment identification? ▪ Can we use the ID's in the GIS?

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Other Comments

<i>Topic/Issue</i>	<i>Comments</i>
Customers	<ul style="list-style-type: none"> ▪ The peculiarity with the Philippines is that the residential customers who are the most difficult to supply, and most costly on the per unit basis, <i>sila pa ang nag-re-reklamo sa ERC</i> ▪ It seems that Metro Manila residents are subsidizing customers in the rural areas ▪ What is the political will of ERC to resist populist groups?
Non Technical Losses	<ul style="list-style-type: none"> ▪ Can we hold a forum specifically for minimizing non-technical loss? ▪ Non-Technical Loss is embedded in the culture. ▪ If the utility is not willing to go after the scalawags, then the utility should shoulder the losses and not pass that to consumers. ▪ If there are 1001 ways of stealing electricity, there should also be 1001 ways of going after theft. If you put your heart into it, you can do it. ▪ The utility has other responsibility other than going after energy theft. This activity is important but not primordial. ▪ Even if a large utility spends Php 1 B in going after energy theft, there is no assurance that the losses will go down. ▪ Since the law defines pilferage as a criminal offense, this issue is not for utilities alone but for the community and the government as well
Load Flow Software	<ul style="list-style-type: none"> ▪ Will ERC specify a load flow tool to be used? ▪ Is there a way to check the accuracy of the solution of the software? ▪ To check the accuracy of the computation is to compare the results with actual measurements. ▪ ERC should provide a system analysis software for the utilities. ▪ Can this software handle the low voltages caused by NPC? ▪ Can the utility invite the software provider to explain the simulation tool to ERC?

Funding	<ul style="list-style-type: none"> ▪ Will there be ADB or WB funding for projects related to system efficiency improvements? ▪ This procedure is a good tool/procedure in convincing financial managers to allocate funds for system improvement
TRANSCO	<ul style="list-style-type: none"> ▪ How did TRANSCO come up with the 4-4.5% losses being passed to its consumers (i.e. utilities)? ▪ <i>Pwede bang idagdag na lang ito sa Non Technical Loss?</i> ▪ Can the ERC help the utilities request data from TRANSCO regarding subtransmission line models? ▪ Can we verify the accuracy of TRANSCO metering? ▪ Are there provisions in the law regarding regulation for TRANSCO? ▪ They do not differentiate between customers metered in the sending end from those metered in the receiving end.
Distribution Development	<ul style="list-style-type: none"> ▪ We already submit Distribution Development Plans (DDP) to NEA, do we need to submit for approval to ERC planned network projects?
EPIRA	<ul style="list-style-type: none"> ▪ The caps may increase and the rates will eventually increase, will it still be consistent with the promise of EPIRA of reduced rates?
Efficiency	<ul style="list-style-type: none"> ▪ Lower losses do not necessarily mean higher efficiency, it could be that the system is underutilized.
Calibration of Meters	<ul style="list-style-type: none"> ▪ Suggestion to deputize a private (third party) entity to perform this
Training Workshop	<ul style="list-style-type: none"> ▪ The ERC should conduct a similar activity for General Managers and Board of Directors
Penalties and Incentives	<ul style="list-style-type: none"> ▪ RA 9136 specifies that violators shall be penalized pursuant to Sec. 46. What are the penalties? ▪ Will ERC consider the Law of Diminishing Returns in giving incentives for loss reduction?
Interruptions	<ul style="list-style-type: none"> ▪ How do we indicate/incorporate interruptions?