

CROSS - REFERENCE APPENDIX B MARCH 14TH ORDER

Item	Citation	Regulation	Reference	Request	Response
1	Section 2.02 (E) (2)	Source documents not publicly available or readily accessible are included electronically.		Provide all sources (in electronic form if possible) used in the development of the load and fuel price forecasts that are not readily accessible (such as forecasts made by others including Moody's, FOMB, and fuel market sources).	All available sources are in work papers or referenced in the document.
2	Section 2.02 (E) (3)	Copies of relevant pages from studies, reports, books, or periodicals that are not readily accessible			There are copyrights issues. Please be specific of what information is required that is not public.
3	Section 2.02 (F)(1)(a)	Load Forecast Development workpapers	Files provided	Matlab regression model (discussed on page 3-2 of the IRP Main Report) has not been provided. In addition, the Matlab model used to develop stochastic load forecasts has not been provided. Provide these models along with all other workpapers, as required.	" MATLAB is a multi-paradigm numerical computing environment and proprietary programming language developed by MathWorks. The Matlab code developed by Siemens for the load forecast is proprietary and cannot be shared. The gross load forecast was developed using the Ordinary Least Squares linear regression method. The identified coefficients and regression results from MATLAB are included in the excel work files and discussed in the IRP report. In absence of MATLAB, the regression results and coefficients can be replicated using MS-Excel linear regression function. The results are the same. The results of the excel regressions by customer class are also included in the excel file "Step2_PREPA_Econometric_ModelDev_smooth_final"
4	Section 2.02 (F)(1)(b)	Fuel Price Forecast Development workpapers	Files provided	Formulae have not been left intact as required by the rule. Provide the file with all formulae intact.	See workpaper PREPA Fuel Forecast 06032019_FINAL_with formulas.xlsx
5	Section 2.02 (F)(1)(f)	Electronic, spreadsheet-based versions of all tables and figures	There does not appear to be a map of the IRP with the workpapers. For example, Exhibit 1-1 and Exhibit 3-1 of the IRP Main Report are not obviously marked or mapped.	Provide a single index that lists each table and figure in the IRP and identifies which electronic file and worksheet it comes from.	Under each table of the IRP and Appendices the reference was added. This provides the same information requested as well as the context.
6	Section 2.03 (C)	Load forecast of future capacity and energy demand requirements and an analysis of prior forecasts	Ex. 1.0 IRP Main Report Part 3; ex. 1.04 Appendix 4; Workpapers.	Waiver request granted for analysis of prior forecasts. PREPA shall provide updates to Exhibits 3-9, 3-16, and 3-21 that supplement existing gross forecast data with information on net energy and demand forecasts. Net energy and demand are to reflect the effect of forecasted EE and DG that lowers the net load seen on the PREPA transmission grid. Workpapers and Appendix 4 contain this level of detail, but hte main body of...	See revised section 3.1.6 and 3.18 and referenced exhibits showing the impact of EE and the impact of costumer owned generation.

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7	Section 2.03 (C)(1) (c) (i) and (ii)	Historic Peak Demand and Energy covering the ten - year period prior to the first year of the IRP period: The total annual electricity generation and sales for the utility and consumption for each customer class. The coincident peak electricity demand for the utility and each customer class	Ex. 1.0 IRP Main Report Part 3	Provided historical total annual generation for PREPA system, to complement Exhibit 3-1. Provide as supplemental Exhibits or workpapers actual or estimated historical peak demand (MW) for the total system including losses, and by customer class, to complement the data shown in Exhibit 3-1, at least back to 2008. If historical peak losses are available by customer class, please provide. State if based on actual or estimated amounts; if estimated, describe the method used.	Added to section 3.1.1
8	Section 2.03 (C) (2) (g)	Considers the impacts of existing demand-side resources, anticipated changes to rate design, building codes and standards, deployment of distributed generation, and other important factors.	Ex. 1.0 IRP Main Report Part 3 and Workpapers - load forecast	In reference to the updated Exhibits 3-9, 3-16, 3-21 that address the effect of EE and DG on gross load, explain if any building code changes are built into the forecast.	See updated Appendix 4 on EE and updated Section 3. The only effect of changes in building codes is, as indicated in Section 3 of the main report, what is built in the forecast as naturally occurring EE and the reconstruction savings referenced in Appendix 4.
9	Section 2.03 (C) (2) (h)	Considers the impact of technical losses		Provide an estimate of how different levels of distributed generation could reduce overall loss levels, both in absolute (e.g., energy x baseline loss factor) and relative (e.g., reduced baseline loss factor) terms, explicitly including the potential for reduced losses for scenarios with more DG.	See Appendix 1, Section 5 Distribution; Impact of DG on distribution technical losses.
10	Section 2.03 (D)(1)(b)	Existing Supply-Side Resource Table			See Part 4, Section 4.1 Existing Resources and Resource side work papers
11	Section 2.03 (D)(1)(b)(iii)	Annual capacity factor for each of the last five years	Provided in Ex. 1.05 Appendix 5, but not in Main Report	Provide the single comprehensive table (or table by type of resource) with each sub-item required by the rule	See Part 4, Section 4.1 Existing Resources and Resource side work papers
12	Section 2.03 (D)(1)(b)(vii)	Commercial operation date	Provided for CCGTs (page 4-5) and AES and EcoEléctrica (page 4-8), but not for STs, GTs, or Hydro. Provided in total in Ex. 1.05 Appendix 5.		See Part 4, Section 4.1 Existing Resources and Resource side work papers
13	Section 2.03 (D)(1)(b)(viii)	Remaining service life	Not presented		See Part 4, Section 4.1 Existing Resources and Resource side work papers PREPS Depreciation Study (Confidential)
14	Section 2.03 (D)(1)(b)(xi)	Average annual heat rate over the last five years	Exhibit 4-1 of IRP Main Report provides heat rate at maximum capacity, but not the actual annual average heat rates		See Part 4, Section 4.1 Existing Resources and Resource side work papers

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15	Section 2.03 (D) (1) (b) (xii)	Current fuel cost in dollars per MMBtu	Ex. 1.0 Part 7 provides projections, with the 2018 values informed by actual prices, but no actual prices are provided		See Part 4, Section 4.1 Existing Resources and Resource side work papers
16	Section 2.03 (D)(1)(b)(xvi)	Average annual capital expenditures over the last five years in total dollars.			See Part 4, Section 4.1 Existing Resources and Resource side work papers
17	Section 2.03 (D)(1) (c)	Existing Supply-Side Resource Supplement Data	Part of Ex. 1.05 Appendix 5		See Part 4, Section 4.1 Existing Resources and Resource side work papers
18	Section 2.03 (D)(1)(c)(ii)	Expected retirement date for any resource expected to retire within the first ten years of the IRP period, and an explanation of the reason	Exhibit 10-5 of IRP Main Report has unit retirements under Action Plan, no explanation for why units are necessarily retired in Section 8.2.3.		As indicted in the report, these units are retired economically by the LTCE with the exception of any MATS affected unit retired in 2024. The Economic retirement means that the plant would not support its fixed costs. Section 8.1 provides a detail on LTCE identified retirements
19	Section 2.03 (D)(1)(c)(iii)	Dates for renewal of operating licenses and permits			See Part 4 Section 4.3
20	Section 2.03 (D) (1) (c)(iv)	Compliance schedule with current, proposed, and reasonably anticipated regulatory and legal requirements	Section 8.2.6 addresses environmental compliance. There are not schedules provided.	Provide each of the required elements in a table or tables in Appendix 5.	See Part 4 Section 4.3
21	Section 2.03 (D)(1)(c)(v)	Expected capital and operating costs for compliance with current, proposed, and reasonably anticipated regulatory and legal requirements	Section 8.2.6 addresses environmental compliance. There are no schedules or compliance costs provided.		See Part 4, Section 4.1 Existing Resources and Resource side work papers
22	Section 2.03 (D)(1)(c)(vi)	Expected yearly non-environmental capital expenditures for the first ten years of the IRP period	Section 8.2.2 provides capital expenditures for NEW generation assets through 2028, but there is no info		See Part 4, Section 4.1 Existing Resources and Resource side work papers
23	Section 2.03 (D)(1)(c)(vii)	any important changes to the resources since the approval of the most recent IRP or expected to occur prior to the filling of a review, update or amendment IRP, including: A. A description of each large capital project (over \$5,000,000) expected in the next (5) years. B. Changes in fuel types, or procurement sources or strategies C. Operational changes expected to result from economic restrictions or environmental regulations	Exhibit 10-8 of IRP Main Report contains some capital expenditures without explanation. Exhibit 6-12 of IRP Main Report contains some fuel conversion costs information. Section 4.2 of IRP Main Report addresses some environmental regulations.		The IRP investments provided are overnight. We improved the tables with details on Section 10 workplan. Also see "Metrics Tab" on each of the LTCE's workpapers with the generic name SxSy_Metrics_YYYY_xlsx.
24	Section 2.03 (D)(1) (c)(viii) and (F)(1)(b)(viii)	A description of how the resource contributes to meeting PREPA's requirement for "high efficiency" generation	PREPA has requested a waiver since there is no established definition for "high efficiency"	Provide a description of how existing and proposed resources meet (or don't meet)"high efficiency" definition requirements, as they exist in draft form (Commission Resolution, August 30, 2018, CEPR-MI-2016-0001).	See updated section 8.2.9 and 8.3.7 . Note that due to the high level of renewable the capacity factors of thermal are lower than typical.
25	Section 2.03 (E)(1)	Planning Reserve Margin Assessment	Section 8.7 of IRP Main Report	Provide further discussion to justify the selection of a 30% planning reserve margin.	The 30% was an initial estimation based on twice the largest unit. This was added to part 8, section 8.7.1 under PRM.

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26	Section 2.03 (F)(1)(a)(vi)	Effective load carrying capacity	No discussion of peak coincidence or ELCC in Part 6 of IRP Main Report.	Add discussion of peak coincidence and ELCC of wind and solar resources. Account for locational variability in distribution peaks, such as commercial and industrial peaks that occur during daylight hours, as required.	The reserve is defined by the night peak. During the day peak there are no issues with reserve requirements as the generating units are at the minimum and storage is charging, which if required can reverse and inject power. Can show this for selected days on hourly results. See document; Aurora Method and Hourly Dispatch Assessment.docx in LTCE & Nodal Workpapers; hourly folded
27	Section 2.03 (F)(2)	Projections by customer class	Ex. 1.04 Appendix 4- DG	Provide estimate of DG by customer class. Provide estimate of loss reduction impacts of increased DG.	See updated Appendix 4; DG by customer class provided and workpapers
28	Section 2.03 (F)(2)(b)	Inclusion as an expected reduction from baseline load forecasts	Ex. 1.0 IRP Main Report Part 3; Ex. 1.04 Appendix 4, Workpapers	Provide table of gross and net load including the effect of DG, as noted above for compliance with Section 2.03 (C) of Regulation 9021 as updates to Exhibits 3-9, 3-16 and 3-21.	See revised section 3.1.6 and 3.18 and referenced exhibits showing the impact of EE and the impact of customer owned generation.
29	Section 2.03 (F)(4)(a)	Description of each storage option's anticipated use		For each resource scenario: describe storage use, and provide at least sampled modeled output (e.g. one 24-hour day) indicating what services it is providing in each hour. Provide hourly production cost output file for at least one full year at maximum storage penetration, for those runs where available.	See document; Aurora Method and Hourly Dispatch Assessment.docx in LTCE & Nodal Workpapers; hourly folded
30	Section 2.03 (F)(4) (b) and sub-parts	Includes valuation framework for energy storage options. Ancillary services, which may include avoidance of load shedding Load - shaping services Locational benefits	Waiver requested.	Provide a valuation framework that quantitatively assigns value to storage for all ancillary service provisions benefits. Also describe how Aurora treats these resources as part of the commitment and dispatch process. Provide at least example days for each scenario that shows charging/discharging patterns. provide hourly output workpapers for storage resources from Aurora runs, for at least the top 5 NPV resource scenarios including S3S2, S3S3, and S5S1. Provide information on the load-shaping aspects of the storage resource. Provide information on the relative value of location for storage resource.	See document; Aurora Method and Hourly Dispatch Assessment.docx in LTCE & Nodal Workpapers; hourly folded
31	Section 2.03 (G) (1) (b) and (G) (2) (a) (vi)	Annual emission prices and emission costs	Ex. 1.0 IRP Main Report Section 4.2, but no sensitivity appears to use the prices shown	Describe how emission prices (for any pollutants) are use in the modeling. If they are not, provide a justification for why this requirement should be waived.	See Part 4 Section 4.3

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32	Section 2.03 (G) (2) (a)(i)	Economic conditions	Ex. 1.0 IRP Main Report Exhibit 3-18.	Describe in detail how the economic forecast impact the gross sales projections, and why the range selected (which appears to corresponding to 25 th and 85th percentiles) is an appropriate choice.	See Part 3 Sections 3.1.9 to 3.1.12
33	Section 2.03 (G)(2)(a)(iv)	Customer- sited distributed generation	Ex. 1.04 Appendix 4.	Provide a discussion of the range of possible outcomes for customer-sited DG and show how this range is reflected in the load forecasts used in IRP analysis.	See updated Part 3 for impact of DG. Only one central scenario was produced; however this is considered representative of a medium to high adoption rate.
34	Section 2.03 (G)(2) (a) (v)	Fuel Prices	EX. 1.0 IRP Main Report Exhibit 7-13 et seq. present +/- Std Dev.	Provide 5th and 95 th percentile fuel prices and explain why PREPA chose to use either +/- one standard deviation or 5 th and 95 th percentile fuel prices for high and low fuel price sensitivities.	See updated section 7.2.5
35	Section 2.03 (G)(2)(a)(vii)	Capital costs	Ex. 1.0 IRP Main Report Exhibit 6-13.	Capital costs presented as point estimate. Provide a range of capital costs for capital projects included in the IRP analysis, including at least for each generation resource and large components of supporting infrastructure (such as fuel import facilities)and for the transmission and distribution system costs (in aggregate, if necessary).	See new exhibit 7-5 for gas infrastructure capex ranges. See added discussion on thermal costs in section 6.2.2.3
36	Section 2.03 (G) (2) (d)	Includes reference case scenario consisting of median probability outcomes.	Ex. 1.0 IRP Main Reports Parts 3, 4.2 and 7.	Explicitly identify the reference case for assumptions and forecasts of modeling parameters and describe how it reflects median probability outcomes.	The Load forecast section 3.1.12 confirms that the Reference Case of Base Case is the expected middle of likely outcomes. Also see section 7.2.5 for the selection of fuel prices and the sensitivities to high and low prices. For generation CapEx we provided information on the range of error of the selected values on section 6.3.2.3
37	Section 2.03 (H) (1) (a) (i)	Documentation of resource plan development modeling mechanisms.	Ex. 1.0 IRP Main Report Part 8.	Part 8 provides the results of scenarios runs, but it does not provide a clear description of resource plan development tools and how they are employed. Provide a specific description of the way which the Aurora LTCE was employed to produce scenario results. Include all of the key	See updated Part 8 and Aurora Method and Hourly Dispatch Assessment.docx workpaper

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38	Section 2.03 (H)(1)(a)(iii)	Table illustrating the key differences between resource plans	Ex. 1.0 IRP Main Report Part 8, Part 1.	Provide three coherent tables, one for each of "base", "high", and "low" load scenario groupings, that reflect revisions of Exhibit 8-1 and/or Exhibit 1-1, combining the core parameters provided in these Exhibits. These tables must clearly show resource additions and year, retirements and years, NPV, gas infrastructure elements and their associated total costs and the PREPA- apportioned costs, other key parameters from Exhibit 8-1, and transmission and distribution spending and relative differences in T&D assumptions (if any) across each plan. Include for each table any additional sensitivity run results ordered by the Energy Bureau, for the applicable load scenario case.	See updated Part 8, section 8.1 the table there is presented by Scenario, strategy, sensitivity and load level. However this information is also on the workpaper SummaryPREPA IRP Case-Report_Figures V10.xlsx where it can be filtered as required.
39	Section 2.03 (H) (1) (a)(v) and (H)(1)(b)(v)	a) v) Load and resource table for the preferred resource plan showing values year by year	Ex. 1.0 IRP Main Report Part 8, workpapers.	Provide a single table in the IRP body and in an Excel workpaper showing peak load and resource summaries by year for the Preferred plan, including PREPA's net position (short or long on capacity) relative to expected needs and confirm what planning reserve margin is used for "expected needs". Provide a summary cash flow table for the body of the IRP and as a workpaper, for the Preferred Resource Plan, and for at least the top 5 least cost plans (base load scenario), including all elements identified in 2.0 H)1) b)v). Produce and provide a workpaper "metrics" for the Preferred Resource Plan, as complement to teh metrics files provided for all individual resource plans.	See updated Part 8, section 8.1 and the Metrics tab on each of the LTCE workpapers with the generic title SxSy_Metrics_yyyy.xlsx
40	Section 2.03 (H) (2) (b) (v)	These sensitivity analyses should inform the selection of the Preferred Resource Plan		Provide a detailed description of how the results of the sensitivity analyses conducted, including the new sensitivity analyses specified in this Order, inform the selection of the Preferred Resource Plan.	See Part 8, Section 8.1
41	Section 2.03 (I)	The IRP shall include an annotated list of key caveats and limitations of its analysis, including the impact of uncertainty, the modelling mechanism, key regulatory and project execution assumptions, and costs. The purpose of this section is to illustrate PREPA's certainty with respect to the Preferred Resource Plan.	Ex. 1.0 IRP Main Report Part 9.	PREPA should amend this chapter to discuss relevant uncertainties in the capital and operating cost (including fuel cost) and performance of fossil fuel resources.	See updated Part 9, point 10 and sections 6.3.2.3 on conventional generation capital costs, 6.4, 6.5 and 6.6 on renewable, 3.1.9 on load forecast and 7.2 on fuel

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42	Section 2.03(J) (1)	Transmission and Distribution System Documentation	Ex. 1.01 Confidential Appendix 1, Section 3, Integrated Steady State Analysis. Section 4, Integrated System Stability Analysis.	Integrated system steady state and stability analyses are provided for some, but not all "low NPV" resource plans. Provide at least an integrated system steady state analysis of two base load least-cost plans, S3S2B and S5S1B. If necessary, also provide an integrated system stability analysis of these plans.	See updated Appendix 1 Section 3 and Section 4
43	Section 2.03(J)(1)(a)	Existing Transmission Facilities Descriptions- The IRP shall include a brief narrative description of the existing electric transmission and identify any transmission constraints and critical contingencies. The information shall include at a minimum:	The IRP Main Report Part 1, page 1-7; Part 10, page 10-10; Ex. 1.01 Confidential Appendix 1. Minigridd detail and suggested improvements are listed, but no overview per the Regulation 9021 is provided.	Provide a narrative description of the transmission system, including a description of the main transmission constraints, if any, and the critical contingencies.	See Appendix 1 Section 2.1 PREPA Transmission System (pages 2-1 and 2-2) and Appendix 1 workpapers.
44	Section 2.03 (J) (1) (a)(i)	A summary of the characteristics of all existing transmission and subtransmission facilities of thirty-eight kilovolts (38 kV) or higher;	Ex. 1.01 Confidential Appendix 1. No high - level summaries are provided. Minigridd discussions and recommended improvements are provided without any summary background documentation.	Provide a summary of the transmission and sub-transmission system characteristics.	See Appendix 1 Section 2.1 PREPA Transmission System (pages 2-16,2-28, 2-42, 2-51, 2-60 and 2-61) and Appendix 1 workpapers
45	Section 2.03 (J)(1)(a)(ii)	A discussion of whether the transmission system constraints the transfer of electricity from existing projects, potential new projects, or projects under development or consideration, including a description of its ability to interconnect intermittent renewable generation projects and microgrids, as applicable, and with as much specificity as practical;	Ex. 1.01 Confidential Appendix 1. Ex. 1.0 IRP Main Report Chapter 8. Waiver Requested	Specify formally whether or not the system constrains potential new projects for interconnection; and generally describe what limitations may exist, if any. As noted in the Rule, provide as much specificity as is practical. If the primary concern associated with the waiver request pertains to transmission required directly for interconnection to a resource from the grid, specify this, including the extent to which this is a broad concern or just a concern associated with the normal course of interconnection activity required to connect a new resource.	Generator interconnection discussion in Section 3.6 in Appendix 1 (page 3-1) and Appendix 1 workpapers ITEM 45_Transmission System Constraints.docx

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46	Section 2.03 (J)(1)(a)(iii) and (iv)	Existing Transmission Facilities Description iii. A schematic map of the transmission and subtransmission network showing transfer limits, which shall be treated as critical energy infrastructure information and handled in accordance with the procedures set forth in CEPR-MI-2016-0009 as currently amended and may be amended from time to time; and iv. A map showing the actual, physical routing of the transmission and subtransmission lines, geographic landmarks, major metropolitan areas, and the location of substations and generating plants, and interconnections with distribution substations...	Ex. 1.01 Confidential Appendix 1, Appendix F and G	Provide PREB with 2 hard copies of the complete schematic map. Provide PREB with 2 hard copies of the complete transmission map. Provide a separate copy of the complete schematic map with annotations on transfer limits, if any, or a summary table of limits, if any, with a clear mapping to the critical circuits on the schematic diagram.	See appendix 1 workpapers
47	Section 2.03 (J)(1)(b)	Existing Distribution Facilities Description The IRP shall include a brief narrative description of the distribution systems, including description of its ability to accommodate incremental penetration of distributed generation, including intermittent distributed generation, and its ability to receive new loads over time, such as, for example, increasing penetrations of electric vehicles.	Ex. 1.01 Confidential Appendix 1, Section 5. Ex. 1.04 Appendix 4, DG section. Waiver request.	Provide a narrative description of the current distribution system, with inclusion of core parameters (e.g. # and size of feeders, range of loading on feeders, etc.) summary statistics, and underlying basic design criteria. Summarize current status of distribution system repair post-hurricanes. Provide at least a high level summary beyond the material provided in the minigrid design sections that describes at least in broad terms the ability of the distribution system to absorb a fraction of the overall expected solar PV, potentially beyond the distribution-connected DG assumed in the modeling runs. Provide rough timetables (next five years) of what distribution system investment could be required to absorb increasing amounts of DG; and/or provide a clear direction as to where in the IRP filing this information can be gleaned. Provide any summary information PREPA has on the overall thermal or voltage concerns that exist across the distribution system, without having to rely on a comprehensive load flow analysis of a large set of feeders.	See Section 5.2 of Appendix 1 for a description of the distribution system and the main operating/design issues identified.
48	Section 2.03 (J)(1)(c)	Existing Advanced Grid Technologies Description- The IRP shall identify the areas within the service territory where advanced meters and other advanced grid technologies have been installed, along with any plans to expand the integration of any such technologies into its system. The IRP shall include a brief description of ...	Waiver requested.	Provide any summary information available on the pilot programs that resulted in some smart meter installations across the island. Provide further information on other advanced technologies in place or under consideration, such as transmission and distribution system technologies.	No current information available

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49	Section 2.03 (J) (1) (d) and (J)(1)(d)(vi)	The IRP shall provide a detailed narrative description of any planned electric transmission and subtransmission facilities, and a description of the plans for development of facilities during the next ten years of the Planning Period. The description shall include, at a minimum, all information regarding: PREPA shall submit a justification of its transmission development plans,	Ex. 1.01 Confidential Appendix 1	Provide a summary description, with detailed metrics/parameters as available, on any planned transmission separate from that described for the minigrids. Provide a summary overview of current status of planned "hardening" projects. Differentiate between what would or is required based on current planning, and that which is proposed under minigrid planning constructs.	See workpaper: _Planned Transmission Separated From Describe for Minigrids.docx and Appendix 1.
50	Section 2.03 (J) (1) (d) (ix)	A high level analysis of PREPA's transmission system's ability to permit power interchange with microgrids and other independent power producers. PREPA should provide examples of interconnection studies from recent renewable integration projects.	Waiver requested.	As already indicated in Existing Transmission Facilities Description", provide a narrative description of the transmission system, including a description of the main transmission constraints , if any, and the critical contingencies, adding any new information required if non-minigrid transmission is planned as part of teh Preferred Resource Plan.	See Appendix 1 (page 3-1)
51	Section 2.03 (J) (1) (d) (x)	A diagram showing PREPA's import and export transfer capabilities and identifying the limiting element(s) during each season of the next ten years. In addition, PREPA will provide a listing of transmission loading relief (TLR) procedures called during the last two seasons for which actual data are available. For each TLR event, the listing shall include the maximum level, and the duration at the maximum level, and the magnitude (in MW) of the power curtailments.	Waiver request.	Provide at least high-level information on the transmission schematic diagram already included indicating any limitations, if applicable. Indicate via MW or MVA limitations associated with a defined "cut plane" or other similar transfer path line grouping. No TLR information is required.	See Appendix 1 workpapers
52	Section 2.03 (J) (1) (e)	The IRP shall provide a detailed narrative description of any planned changes in approach, standard practice, or broadly applicable substation, circuit or feeder design for PREPA's distribution system for the next ten years. This description shall address any changes in distribution facilities that impact the ability to accommodate incremental penetration of distributed generation, including intermittent distributed generation, including intermittent distributed generation, and the ability to receive new loads over time. PREPA shall submit a substantiation of distribution development plans, including, if available: ...	Ex. 1.01 Confidential Appendix 1, Ex. 1.04 Appendix 4. Waiver requested	Provide at least a high level description of plans for distribution system repair, how DG deployment and required distribution system investment will be coordinated with such repairs, and any related direct or conceptual plans for distribution system grid modernization.	See Appendix 1 Section 5.2 and 5.3 for information available

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53	Section 2.03 (J)(2)(a)	The IRP shall identify PREPA's transmission standards and shall confirm that the PREPA transmission standards are in compliance with the standards of the North American Electric Reliability Corporation. If any of PREPA's transmission standards are inconsistent with standards from North American Electric Reliability Corporation, then PREPA shall identify each such inconsistent standard and provide the explanation and rationale for the inconsistency.	The filed IRP does not mention NERC or compare PREPA's transmission planning standards with NERC standards. Waiver requested.	Regulation 9021 requires that PREPA identify what transmission planning standards it abides by, and whether they are the same as the NERC standards.	See Section 2.1 in Appendix 1
54	Section 2.03 (J)(2)(c)	The IRP shall identify thermal and voltage reliability issues in PREPA's transmission system and distribution systems. Such information shall be treated as critical energy infrastructure information and handled in accordance with the procedures set forth in CEPR-MI-2016-0009 as currently amended and may be amended from time to time;		PREPA must indicate where the Transmission Report provided the requested information for the transmission system. PREPA must also provide, at least at a high level, an identification (Regulation 9021 section states "identify") of at least the major thermal and voltage reliability "issues" across the distribution grid similar to discussion of Section 2.03 (J)(1)(b)(i). PREPA need not identify, by location, each and every concern of the distribution grid - instead Regulation 9021 requires that the "issues" be identified.	See section 3.3 in Appendix 1 for a description of expected performance, 3.4 for an assessment of performance after a major storm and 3.5 for an assessment of the existing system.
55	Section 2.03 (J) (2) (e)	The IRP shall document the transmission and distribution implications of the Preferred Resource Plan, including assessing if the plan requires incremental transmission or distribution mitigation or changes.	Ex. 1.01 Confidential Appendix 1. Ex. 1.0 IRP Main Report Chapter 8.	<ol style="list-style-type: none"> 1. Provide, separate from minigrad investment plans, a description and tabular summary of transmission and distribution investments requirements to support resource plans in the event of a Preferred Plan that does not include the minigrad construct as envisioned. 2. Provide a discussion including as feasible, quantitative indications of differences in transmission and investments associated with a minigrad approach under the difference resource plan considered. Confirm (or explain otherwise) that there is no differentiation in potential costs of an optimized minigrad approach across different resource plan. 3. Describe exactly how, if applicable, an optimization of the total costs associated with supply resource deployment and transmission/sub-transmission resource deployment, was undertaken. If no such optimization was undertaken, explain why not... 	See section 3.5 in Appendix 1, for identification of reliability concerns without the minigrad investments.

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56		Action Plan documentation - The Action Plan shall include a table of key actions in the first five years after approval of the IRP including, at a minimum, expected procurement processes for supply-side resources and energy efficiency		Revise Exhibit 10-7 to include all key actions that comprise the Action Plan. For example, the EcoEléctrica contract renegotiation and the provision of energy efficiency are currently excluded. The table itself should also either i)include specific cost data for the major expected resource acquisitions, and the specific financing plan for that cost as a separate descriptive field; or ii) be directly consistent with the information contained in Exhibit 10-8. If the costs for any key action are different that the capital expenditures listed in Exhibit 10-8, those total cost must also be listed and described. In particular, land and...	See updated action plan (Section 10) and discussion on EcoEléctrica contracts in Section 4.2.1.5
57	Section 2.03 (K)(2) (a)	The Action Plan shall be based on the Preferred Resource Plan described in subsection (H) (2) (d) above.	Ex. 1.0 IRP Main Report Part 10	Provide a table that identifies each key action of the Action Plan, as listed in the revised Exhibit 10-7, with the analyzed scenario (such as the ESM plan or S4S2 case) that supports inclusion of that key action.	See revised Action Plan
58	Section 2.03 (K) (2)(d)	The Action Plan shall comply with all laws and regulations enacted that address requirements for demand-side resources and supply-side resources, including but not limited to Act 82-2010.	Ex. 1.0 IRP Main Report Part 10	If not already provided in the new entry for energy efficiency in revised Exhibit 10-7, provide the missing portion of the Action Plan relating to demand-side resources.	See Section 10.3.5 Energy Efficiency in the action plan, see metrics tab on each LTCE workpaper (workpapers with the generic title SxSy_Metrics_yyyy.xlsx) for projected costs and Appendix 4
59	Section 2.03 (N)	Demand - Side Resources Status Update- The IRP shall include an assessment of new and contracted demand-side energy and capacity projects, including energy efficiency, demand-response, distributed generation, and load control programs. This update shall be comprised of an itemized list of each new demand-side resource program under contract but not yet implemented or built at the time of...	Ex. 1.04 Appendix 4 Waiver Request	Demand side resources include distributed generation in addition to energy efficiency and demand response. Provide an assessment of the demand-side resources currently available to PREPA. PREPA must confirm, or explain otherwise, if the distributed generation assessment contained in Appendix 4 represents the entirety of its DG assessment included in the IRP.	The DG in Appendix 4 is the total forecasted available at the time
60	Section 2.06	The IRP shall include a certification regarding PREPA's compliance with the requirements of Section 6B(h)(vi) of Act 83.	No certification has been supplied.	Provide the required certification. In the event that PREPA has not consulted with the Energy Policy Office as required, PREPA shall undertake the required consultation and report on any resulting changes to the IRP.	Done