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Hybrid Renewables and Storage Scheme in Cyprus

Two-Stage Bidding Procedure

Evaluation Criteria[1]

Category I: Investment Aid for Storage Component Deployed by Existing RES Power Plants Operating under Fixed Selling Price Regime (FiT) and Self-consumption Projects		
First Stage: Assessing Bidder's Qualifications, Procedural and Technical Eligibility		
Qualifications of the Bidder		
Criteria	Evaluation method	Min. threshold
Submission in the designated electronic platform/ electronic format as instructed	Yes/No (1/0)	1
Participation/Application fee paid	Yes/No (1/0)	1
Completeness of the submitted documents • Check-List • Organizational Form • Technical Specification Form • Binding Schedule of Implementation • Business Plan of the Project with calculations of the financial figures and results of the project, including LCOS, LCOE, IRR up to 8% max • Price Bid Form, • Appendix[2]: Declaration of compliance with the State aid exemption rules/ Declaration of conformity with State aid[3], Declaration of consent for the processing of personal data, Conflict of interest declaration, Declaration on the avoidance of double funding, Bank Guarantees, Proofs of technical capabilities, Entity founding documents, Proof of financial capabilities, Power of attorney other documents to confirm eligibility of the bidder)	Checklist, Yes/No (1/0)	1 for all
Owner of existing RES power plant under existing support scheme (FIT or a Net-billing scheme for self -consumption)	Yes/No (1/0)	1
Guarantees paid/ Letters of Bank Guarantee provided	Yes/No (1/0)	1
Application's validity of min. 120 days declared (submitted with all tender documents to ensure that all aspects of the financial offer that will be considered in the evaluation will be valid until contract is potentially awarded)	Yes/No (1/0)	1
Any other qualification criteria (financial capacity, turnover, technical experience,)	Yes/No (1/0)	1

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[1] Provided by external Consultants (JASPERS) to MECI
[2] list provided is merely an example and may not include all required documents.
[3] Based on 2022 Guidelines on State aid for climate, environmental protection and energy.

Result:	Total number of qualified applicants	
Technical Eligibility		
Criteria	Evaluation method	Min. threshold
Compliance with subscription rules[4]	Yes/No (1/0)	1
Minimum Storage Duration 75% of estimated annual production to be stored (min storage is 2h-4h for small scale projects)	Yes/No (1/0)	1
Proposed Mature Storage Technology[5]	Yes/No (1/0)	1
Capability of the applicant to provide a service	Checklist, Yes/No (1/0)	1 for all
Technical parameters of the Storage[6]	Checklist, Yes/No (1/0) above the min. threshold	Minimum thresholds for each parameter are presented in APPENDIX I at the end of this document
Ramp Control Rate		
C-Rate min		
C-Rate max		
Response Time (from standby)		
DoD (%)		
Efficiency (%)		
Max. Operating Temperature		
Safety (Thermal Stability)		
Energy Density (Wh/kg)		
Energy Density (Wh/L)		
Power Density (W/kg)		
Max FCR (MW)		
Result:	Total number of eligible applicants Scores ?	
Second Stage: Financial Offer		
Selection Criteria: Financial Offer		
Investment Aid only for the storage component	Price in Euro per MWh electricity injected from the	N/a

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[4] Minimum number of successful bidders or ratio of awarded/applied number of bidders/ capacity. We expect that at least 120 MW of storage could be funded with the 40 mil. Euro, so at least 4-8 applicants and applications with total capacity which is double the awarded capacity.

[5] Technology must have been used internationally in electricity storage facilities which participate in electricity markets and have been put into operation within the period 2018-2022, with a total capacity -equal to or greater than 1 000 MWh worldwide.

6 it is permissible to change the dimensioning of the individual component- within a limit of ± 15 %, provided that this is strictly necessary for technical reasons, in particular due to the availability of standardisation of the dimensions of the main equipment.

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	storage into the grid	

Category II: Investment and Operational Aid for Hybrid Systems with RES generation unit < 150 kW		
Qualifications of the Bidder		
First Stage: Assessing Bidder's Qualifications, Procedural and Technical Eligibility		
Criteria	Evaluation method	Min. threshold
Submission in the designated electronic platform/ electronic format as instructed	Yes/No (1/0)	1
Participation/Application fee paid	Yes/No (1/0)	1
Completeness of the submitted documents • Check-List • Organizational Form • Technical Specification Form • Binding Schedule of Implementation • Business Plan of the Project with calculations of the financial figures and results of the project, including LCOS, LCOE, IRR up to 8% • Price Bid Form, Appendix[7]: Declaration of compliance with the State aid exemption rules/ Declaration of conformity with State aid[8], Declaration of consent for the processing of personal data, Conflict of interest declaration, Declaration on the avoidance of double funding, Bank Guarantees, Proofs of technical capabilities, Entity founding documents, Proof of financial capabilities, Power of attorney other documents to confirm eligibility of the bidder)	Checklist, Yes/No (1/0)	1 for all
Specified stage of project matureness (preliminary grid connection or environmental impact assessed or submission of opinions/authorisations/agreements/ certificates, according to the legislation in force)	No/Yes (1/0)	1
Land availability declaration (The lands/real estates necessary for the establishment and operation of the investment are made available to the project, are free of burdens, are not the subject of disputes pending before the courts of the on the legal situation; are not subject to claims under special or common laws)	No/Yes (1/0)	1
Declaration of exclusive bid submission in the specific category	Yes/No (1/0)	1

[7] list provided is merely an example and may not include all required documents.
[8] Based on 2022 Guidelines on State aid for climate, environmental protection and energy.

Declaration that the amount of state aid requested does not exceed EUR 15 million per undertaking/investment project[9]	Yes/No (1/0)	1
Guarantees paid/ Letters of Bank Guarantee provided	Yes/No (1/0)	1
Application's validity of min. 120 days declared	Yes/No (1/0)	1
Country of registration of the company/ consortium members	Yes/No (1/0)	1
Any other qualification criteria (financial capacity, turnover, technical experience)	Yes/No (1/0)	1
Result:	*Total number of qualified applicants*	
Technical Eligibility (simplified)		
Criteria	Evaluation method	Min. threshold
Compliance with subscription rules	Yes/No (1/0)	1
Installed capacity of the system corresponding to the scheme's category < 150 kW	Yes/No (1/0)	1
Minimum Storage Duration of 2 h	Yes/No (1/0)	1
Proximity to predefined (or excluded) connection nodes. M*ap documents indicating the project area and geolocation data attached*	Yes/No (1/0)	1
Declaration/ Guarantee that the storage component will solely absorb renewable energy generated by the RES source	Yes/No (1/0)	1
Capability of the applicant to provide a service	Checklist, Yes/No (1/0)	1 for all
Result:	*Total number of eligible applicants*	
Second Stage: Financial Offer		
Selection Criteria: Financial Offer		
Operational Support Bid in the form of CfDs in correspondence to administratively set monthly price	Price in Euro per MWh electricity injected from the storage/ RES generation unit into the grid	N/a

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[9] Notification threshold for operating aid for the production of electricity from renewable sources and operating aid for the promotion of energy from renewable sources in small scale installations: EUR 15 million per undertaking per project

Category III: Investment and Operational Aid for Hybrid Systems with RES generation between 151kW up to 0.99 MW		
Qualifications of the Bidder		
Criteria	Evaluation method	Min. threshold
Submission in the designated electronic platform/ electronic format as instructed	Yes/No (1/0)	1
Participation/Application fee paid	Yes/No (1/0)	1
Completeness of the submitted documents • Check-List • Organizational Form • Technical Specification Form • Binding Schedule of Implementation • Business Plan of the Project with calculations of the financial figures and results of the project, including LCOS, LCOE, IRR up to 8% • Price Bid Form, Appendix [10]: Declaration of compliance with the State aid exemption rules/ Declaration of conformity with State aid[11], Declaration of consent for the processing of personal data, Conflict of interest declaration, Declaration on the avoidance of double funding, Bank Guarantees, Proofs of technical capabilities, Entity founding documents, Proof of financial capabilities, Power of attorney other documents to confirm eligibility of the bidder)	Checklist, Yes/No (1/0)	1 for all
Specified stage of project matureness (preliminary grid connection or environmental impact assessed or submission of opinions/authorisations/agreements/certificates, according to the legislation in force)	No/Yes (1/0)	1
Land availability declaration (The lands/real estates necessary for the establishment and operation of the investment are made available to the project, are free of burdens, are not the subject of disputes pending before the courts of the on the legal situation; are not subject to claims under special or common laws)	No/Yes (1/0)	1
Declaration of exclusive bid submission in the specific category	Yes/No (1/0)	1
Declaration that the amount of state aid requested does not exceed EUR 15 million per undertaking/investment project	Yes/No (1/0)	1
Guarantees paid/ Letters of Bank Guarantee provided	Yes/No (1/0)	1
Application's validity of min. 120 days declared	Yes/No (1/0)	1

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[10] list provided is merely an example and may not include all required documents.
11 Based on 2022 Guidelines on State aid for climate, environmental protection and energy.

Country of registration of the company/ consortium members	Yes/No (1/0)	1
Any other qualification criteria (financial capacity, turnover, technical experience)	Yes/No (1/0)	1
Result:	*Total number of qualified applicants*	
Technical Eligibility		
Criteria	Evaluation method	Min. threshold
Compliance with subscription rules	Yes/No (1/0)	1
Minimum Storage Duration of 2 h	Yes/No (1/0)	1
Proximity to predefined connection nodes. Map documents indicating the project area and geolocation data attached	Yes/No (1/0)	1
Installed capacity of the system corresponding to the scheme's category 151 kW ≤ 0.99 MW	Yes/No (1/0)	1
Declaration/ Guarantee that the storage component will solely absorb renewable energy generated by the RES source Or Sizing of storage component allowing annual 25 % storage capacity to third parties (TSO/DSO)	Yes/No (1/0)	1
Capability of the applicant to provide a service	Checklist, Yes/No (1/0)	1 for all
Technical parameters of the Storage[12]	Checklist, Yes/No (1/0) above the min. threshold	Minimum thresholds for each parameter are presented in the APPENDIX I at the end of this document
Ramp Control Rate		
C-Rate min		
C-Rate max		
Response Time (from standby)		
DoD (%)		
Efficiency (%)		
Max. Operating Temperature		
Safety (Thermal Stability)		
Energy Density (Wh/kg)		
Energy Density (Wh/L)		
Power Density (W/kg)		
Max FCR (MW)		

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12 it is permissible to change the dimensioning of the individual component- within a limit of ± 15 %, provided that this is strictly necessary for technical reasons, in particular due to the availability of standardisation of the dimensions of the main equipment.

	Result:	Total number of eligible applicants	
Second Stage: Financial Offer			
Selection Criteria: Financial Offer			
Operational Support Bid in the form of CfDs in correspondence to administratively set monthly price		Price in Euro per MWh electricity injected from the storage/ RES generation unit into the grid	N/a

Category IV and V similar to Category III

Exemption of standard balancing responsibility, as well as the requirement to sell to the market (systems over 400 kW) in the case market conditions, are not in place with notification of transitioning to market set-up after electricity market segment(s) are established.

As concerns balancing responsibilities, as long as the Cy is not interconnected to the EU networks, the beneficiaries of the notified scheme will not be subject to standard balancing responsibilities as no wholesale electricity market exists, nor the transitional market can provide this service.

Since Electricity interconnection is foreseen in 2029, for the period after the interconnection CY commits that the beneficiaries of the notified scheme will be subject to full balancing responsibilities after activating a continuous intra-day market in Cyprus.

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APPENDIX I

Parameters to be examined for Storage Technologies in the final Scheme (DRAFT Preliminary)[13]

Table A	Services (x)	Renewable shifting mFRR, RR	FCR	Frequency Regulation (Operation under AGC), Renwable smoothing / Flex ramping	Black Start	Electric Supply Capacity	Transmission Upgrade deferral (hosting capacity) – Congestion Relief	Inertia
Weight A'		%	%	%	%	%	%	%
Capability of Candidate to provide a service		0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1
Technical Parameters (i)		**Weight B'**						
Capacity (MWh)		%	%	%	%	%	%	%
Ramp Rate		%	N/A	%	%	%	%	%
C-Rate min		%	N/A	%	%	%	%	%
C-Rate max		%	N/A	%	%	%	%	%
Response Time (from standby)		%	N/A	%	%	%	%	%
DoD (%)		%	%	%	%	%	%	%
Efficiency (AC-to-AC) (%)		%	%	%	%	%	%	%
Max. Operating Temperature (ºC)		%	%	%	%	%	%	%
Safety (Thermal Stability)		%	%	%	%	%	%	%
Energy Density (Wh/kg)		%	%	%	%	%	%	%
Energy Density (Wh/L)		%	%	%	%	%	%	%
Power Density (W/kg)		%	%	%	%	%	%	%
Max FCR (MW)		N/A	%	N/A	N/A	N/A	N/A	N/A

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[13] Preliminary input from TDO/DSO for Central Storage Systems (after the meter)

Table B	Score				
Technical Parameters (i)	**X**	**X**	**X**	**X**	**X**
Capacity (MWh)	C > 30	30 > C >25	25 > C> 20	20 > C > 15	15 > C
Ramp Rate	RR > 10	10 >RR >8	8 > RR> 6	6 > RR > 4	4 > RR
C-Rate min	CR > 1C	1C > CR> C/2	C/4 > CR > C/6	C/6 > CR > C/8	C/8 > CR
C-Rate max	CR > 1C	1C > CR> C/2	C/4 > CR > C/6	C/6 > CR > C/8	C/8 > CR
Response Time (from standby)	T < 3sec	3sec < T < 20sec	20sec < T < 5min	5min < T < 20min	20min < T
DoD (%)	DoD > 95%	95% >DoD >86.25%	86.25% >DoD > 77.5%	77.5% > DoD > 68.75%	68.75% > DoD
Efficiency (AC-to-AC) (%)	E > 95%	95% > E > 86.25%	86.25% > E > 77.5%	77.5% > E > 68.75%	68.75% > E
Max. Operating Temperature (°C)	T > 65 °C (or N/A)	65 °C > T > 60 °C	60°C > T > 55 °C	55°C > T > 50 °C	50°C > T
Safety (Thermal Stability)	High (or N/A)	Medium	Low	-	-
Energy Density (Wh/kg)	D > 180 (or N/A)	180 > D > 130	130 > D > 75	75 > D > 65	65 > D
Energy Density (Wh/L)	D > 420 (or N/A)	420 > D > 300	300 > D > 200	200 > D > 100	100 > D
Power Density (W/kg)	D > 500 (or N/A)	500 > D > 400	400 > D > 200	200 > D > 50	50 > D
Max FCR (MW)	FCR > 15	15 > FCR > 12	12 > FCR > 9	9 > FCR > 6	6 > FCR

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APPENDINX II

List of Mature Energy Storage Technologies[14]

Sub-tech.	Maturity (TRL, scale 1 to 9)	Energy capacity	Generation Support Services and Bulk Storage Services						Services to Support Transmission Infrastructure			Services to Support Distribution Infrastructure					
			Storage Services for RES Support	Arbitrage	Capacity Firming	System Electricity Supply Capacity	RES Curtailment Minimisation	Support to Conventional Generation	Transmission Investment Deferral	Angular Stability	Transmission Support	Distribution Grid Upgrade Deferral	Dynamic Local Voltage Control	Reactive Power Compensation	Contingency Grid Support	Intentional Islanding	Cross Sectoral Storage
Lead Acid batteries (LAB) - Short-term storage / UPS	9	< 200 kWh	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Lead Acid batteries (LAB) - Energy storage	9	< 10 MWh	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Lithium-ion batteries (LIB)	9	< 1000 MWh	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Lithium-ion batteries (LIB) - Energy Small	9	< 100 kWh															
Lithium-ion batteries (LIB) - Energy Large	9	< 1000 MWh	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Redox flow batteries - Vanadium (VRFB)*	7-9	10kWh - 800 MWh	X	X	X	X	X	X	X		X	X	X	X	X	X	(X)
Redox flow batteries - Zn Br*	7-8	few kWh to < 100 MWh	X	X	X	X	X	X	X		X	X	X	X	X	X	(X)

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[14] Provided by JASPERS based on other counties similar support schemes.

Sub-tech.	Maturity (TRL, scale 1 to 9)	Ancillary Services									Services to Support Behind the Meter Customer Energy Management						
		Frequency Containment Reserve (FCR)	Automatic Frequency Restoration Reserve (aFRR)	Manual Frequency Restoration Reserve (mFRR)	Replacement Reserve (RR)	Load Following	Frequency Stability of Weak Grids	Black Start	Voltage Support	New Ancillary Services	End-User Peak Shaving	Time-of-Use Energy Cost Management	Particular Requirements in Power Quality	Maximising Self-Production & Self-Consumption of Electricity	Continuity of Energy Supply	Limitation of Upstream Disturbances	Compensation of Reactive Power
Lead Acid batteries (LAB) - Short-term storage / UPS	9	X	X	X	X	X	X	X	X	(X)	X		X		X	X	X
Lead Acid batteries (LAB) - Energy storage	9	X	X	X	X	X	X	X	X	(X)	X	X	X	X	X	X	X
Lithium-ion batteries (LIB)	9	X	X	X	X	X	X	X	X	(X)	X	X	X	X	X	X	X
Lithium-ion batteries (LIB) - Energy Small	9	[RED]		[RED]	[RED]		[RED]	[RED]			X	X	X	X	X	X	X
Lithium-ion batteries (LIB) - Energy Large	9	X	X	X	X	X	X	X	X	(X)	X	X	X	X	X	X	X
Redox flow batteries - Vanadium (VRFB)*	7-9	X	X	X	X	X	X	X	X	(X)	X				X	X	X
Redox flow batteries - Zn Br*	7-8	X	X	X	X	X	X	X	X	(X)	X				X	X	X