Distributed Generation & Electrification

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New England

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New England

Top States for Solar per Sq-Mi

Rank	State
1	*Rhode Island*
2	New Jersey
3	*Massachusetts*
4	Connecticut
5	California

Connections

	CY22	CY21
State	Capacity (MW)	Capacity (MW)
MA	231.38	241.82
RI	73.18	105.42
Total	**304.56**	**347.23**

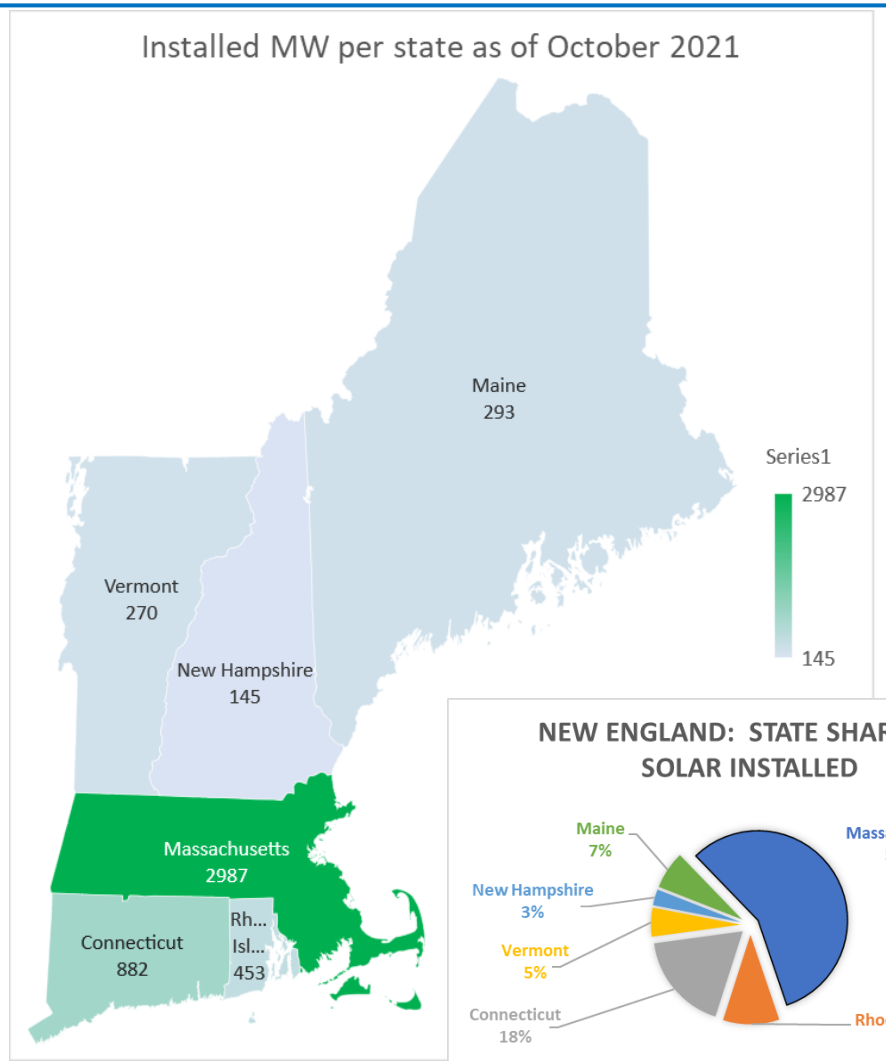
Total Solar Installations between 2010 and Q2-2020

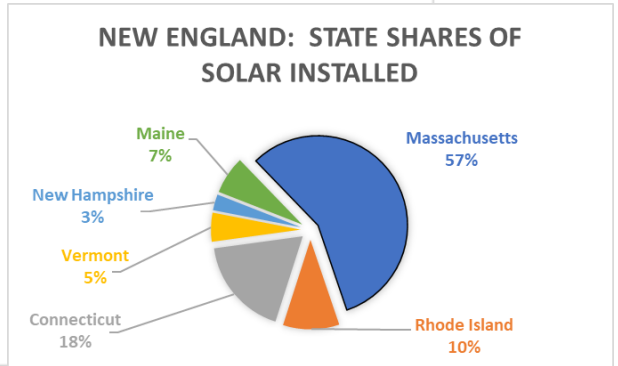
Residential

Rank	Utlity	MWdc
1	PGE	*2,530*
2	SCE	*1,861*
3	SDGE	*1,028*
4	APS	*869*
5	PSEG	*750*
6	Duke	*500*
7	*National Grid*	*482*
8	Southern Nevada	*380*
9	Xcel Energy	*372*
10	Eversource	*358*

Non-Residential

Rank	Total Non-residential Solar PV Installed by Utility Territory	MWdc
1	PGE	*1,763*
2	*National Grid*	*1581*
3	Xcel Energy	*1,132*
4	SCE	*934*
5	Eversource	*831*
6	PSEG	*650*
7	JCP&L	*480*
8	SDGE	*322*
9	APS	*291*
10	New York State Electric and Gas	*253*





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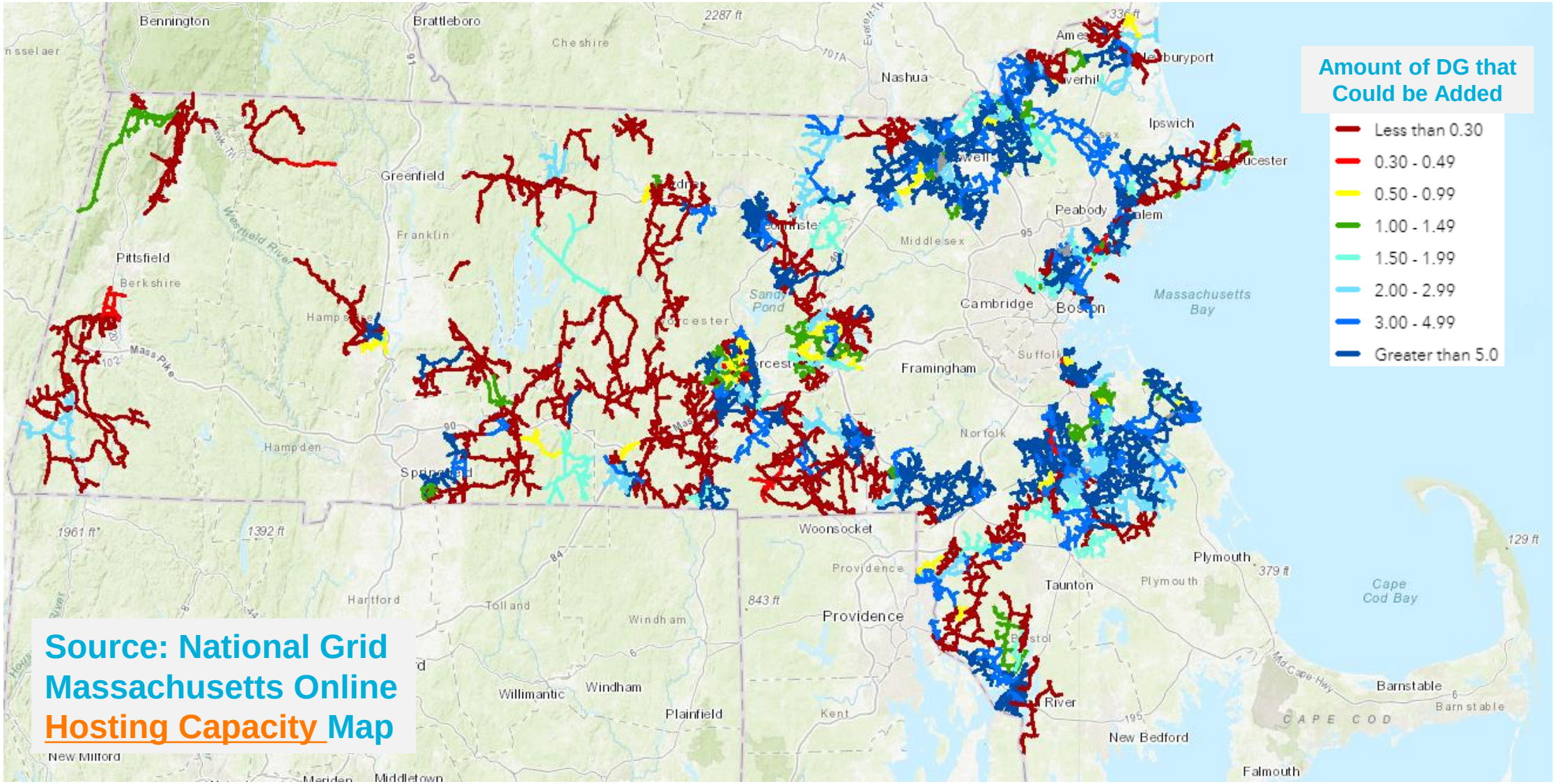
State data from US Energy Information Administration and US Census Bureau

Distributed Generation Volume



Massachusetts: *DG Process Overview per MDPU 1468*

Initial Assessment

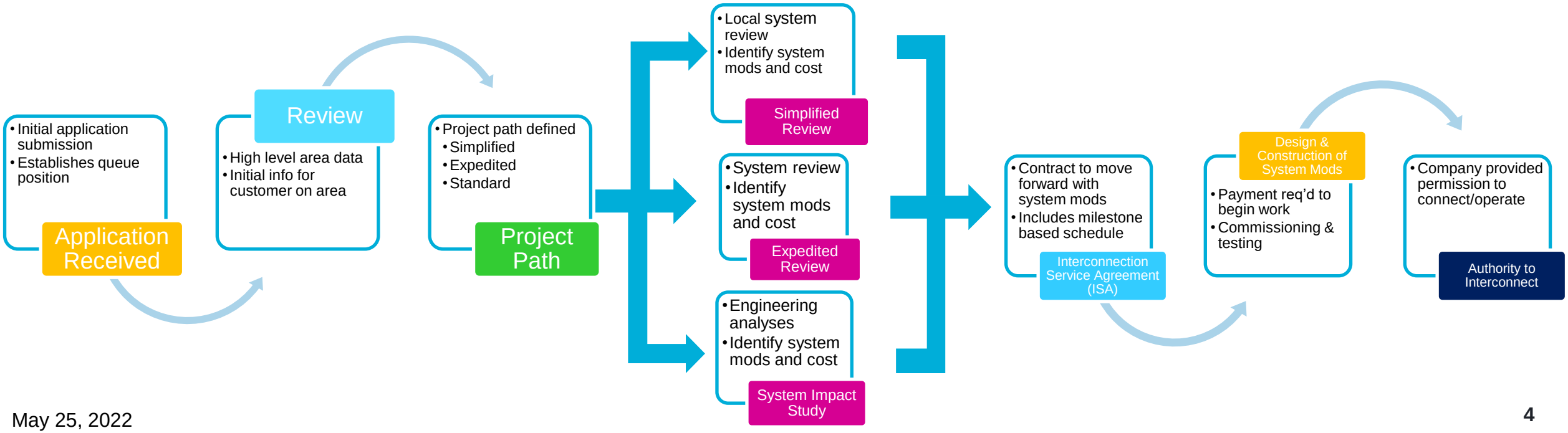
- Application fee
  - Small projects $28
  - Otherwise $4.50/kW up to $7500
- You provide project details
- Nat Grid provides grid info and next step
- Submit application as early as possible

Detailed Project Assessment

- Review impacts to the grid
- Identify any utility equipment to be modified to accommodate the DG

Construction & Connection

- Agreements signed
- Complete utility construction
  - System modification costs are customer responsibility



Distributed Generation Process

Timelines in business days from initial receipt of application

- *Simplified – 30 business days*
- *Expedited – 65 business days*
- *Standard – 160 business days*

All timelines are defined in the DG Interconnection Tariff

- *Additional time for construction schedule & witness test*
- *Excludes hold periods*

Group Studies

- *Required in areas of high saturation, with multiple applications at the same time*
- *Timelines vary by Group depending on group makeup*

Grid Capabilities of the Future

- Grid-edge visibility & digital twin
- DER dispatch & control
- Active grid management
- Seamless E2E user experiences
- Data platforms and APIs

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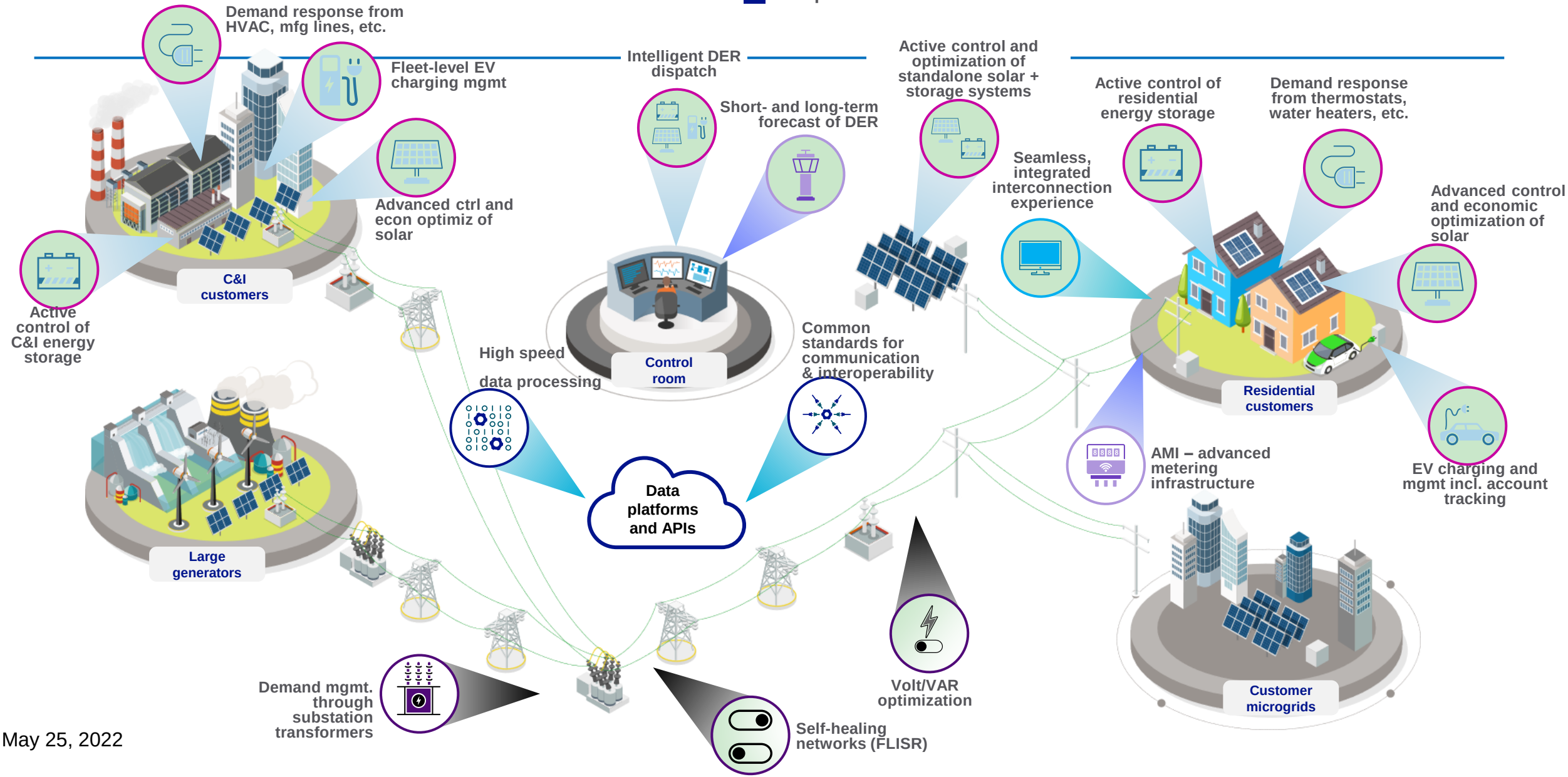

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Useful Links

Distributed Generation Website: https://ngus.force.com/s/ma-home

Interconnection Process Resources: https://ngus.force.com/s/ma-process

COVID & Force Majeure Updates: https://ngus.force.com/s/article/MA-Force-Majeure-Declarations

ISO's Interconnection Process: https://www.iso-ne.com/participate/applications-status-changes/interconnection-process-guide/interconnection-process-steps

National Grid's list of active and pending FERC feeders: https://ngus.force.com/s/?tabset-651ee=2&Infrastructure__c-filterId=00B0W000006uAI3UAM

MA DG Stakeholder Meeting Information: https://ngus.force.com/s/article/MA-DG-Stakeholder-Meeting-Information

ASO Updates: https://ngus.force.com/s/article/MA-ASO-Updates

Hosting Capacity Maps: https://ngrid.apps.nationalgrid.com/NGSysDataPortal/MA/index.html

Storage Assistance - https://ngus.force.com/s/article/Storage-Assistance

DPU Interim Guidance for ESS -

https://ngus.force.com/s/article/How-to-Add-Energy-Storage-to-an-In-Progress-Application-in-Massachusetts

Sample One Line Diagrams SMART Program-

https://ngus.force.com/servlet/servlet.FileDownload?file=0150W00000ET8dj

Interconnection Documents- https://ngus.force.com/s/article/MA-Interconnection-Documents

Typical System Modifications and Estimated Costs for DG Interconnection- https://ngus.force.com/s/article/System-Modifications-for-DG-Interconnection

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