

Infra Dig – Maxine Ghavi on BESS and microgrids

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Battery energy storage systems (BESS) and microgrids have shot up the agenda as they made the comfortable transition from Core + to a distinctly Core infrastructure investment.

In this latest Infra Dig podcast, IJGlobal editorial director Angus Leslie Melville speaks to Maxine Ghavi, senior vice president and head of the grid edge solutions business at Hitachi Energy, who has some 30 years' direct experience in the sector.



This latest podcast falls very much into the How It Works category with the podcast series seeking to fulfil its mission to propagate greater understanding of the infrastructure and energy asset classes.

Maxine is ideally placed to talk about BESS and microgrids as she has held a number of senior roles at Hitachi Energy – ABB prior to that – and her specialist knowledge spans the breath of the power industry... including grid edge technologies, microgrids, storage, renewable energy in general, software and semiconductors.

She kicks off conversation by explaining “grid edge” a term that is increasingly used in infra/energy circles, but that is bandied around with abandon... sometimes with minimal understanding.

“The grid edge describes the technologies, business models and applications that are changing and advancing the grid overall, leveraging customers and utilities and the key element being the decarbonisation that comes into play,” says Maxine.

“That is the grid edge solution. As part of the grid edge solution, there are 2 key components. One is a microgrid and one is battery energy storage, and battery energy storage is a key component enabling a microgrid.

“All of these are in some way, shape or form interconnected. Going back to grid edge technologies, these are basically new technologies that are enabling new business models, advancing the grid, solving very complex that we see – especially with the deployment of distributed energy resources and as we decarbonise the grid.

“Then you look at microgrid which is part of the broader, global energy transformation and it really complements the central grid.”

Maxine continues with her explanation of “grid edge” delving into microgrids and how they operate, often in remote areas, retiring existing expensive and polluting (often diesel) energy generation sources, making that transition to renewable energy.

“Over time as the technology has developed and as the need on the grid has increased ... the resiliency of the grid has been jeopardised and, therefore, by having microgrids connected to the grid, if the main grid goes down you are still able to disconnect from the main grid and still provide power to the loads,” says Maxine.

“This is the transition we have seen for the last 30+ years and we have seen a transformation from off-grid microgrids over the last 5-7 years to a lot more grid-connected applications, leveraging microgrids.

As to battery energy storage, Maxine says: “If you want to maximise the integration of renewables into a microgrid – or into a grid as a whole – battery energy storage and energy storage as a whole enables you to do that... and do that in a way that your system remains resilient and reliable while also maximising the benefits of renewable energy.”

Conversation runs on for almost 30 minutes (ideal time for a commute!) and drills down into all matters microgrid and energy storage.



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