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Distributed Generation Workshop
31 October 2017

Stay connected...

www.enwl.co.uk

Welcome
Lee Maxwell - Energy Solutions Director

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General Housekeeping

Please Sign In...

Facilities are out in the Foyer...

Mobiles and Electronic Devices to Silent Please...

No Planned Fire Alarms...

In the Event of an Alarm...

PLEASE FOLLOW STAFF OUT TO THE STREET AT THE FRONT OF THE BUILDING WHERE WE WILL GATHER TO THE LEFT OF THE MAIN ENTRANCE GATES

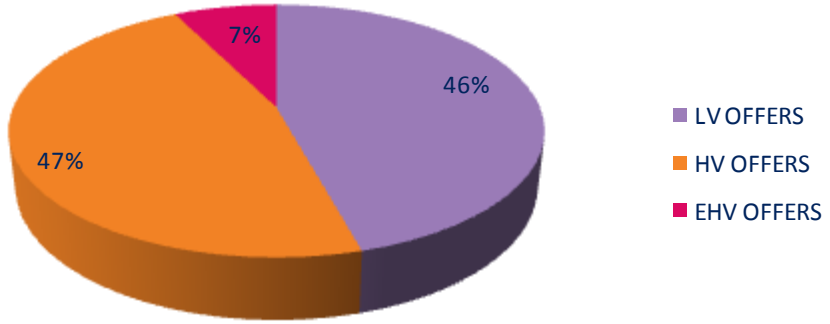
Your Feedback is Important...

Agenda

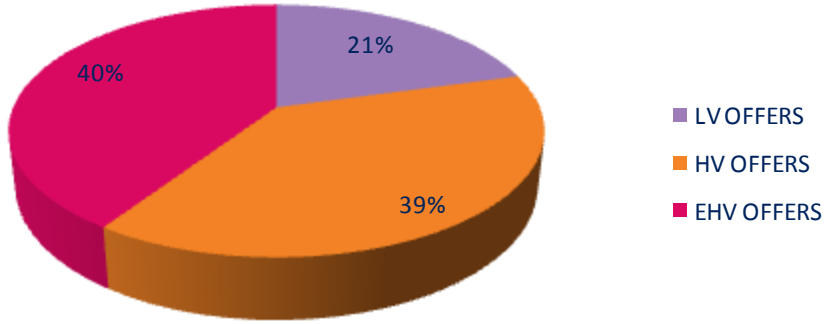
Session	Time
Registration & lunch	12:30
Welcome & Introduction	13:00
Curtailment Index	13:05
Virtual Private Networks	13:35
Incentive on Connections Engagement	13:50
Statement of Works & Network Constraint Update	14:20
Q&A panel	14:35
Close	

Introduction

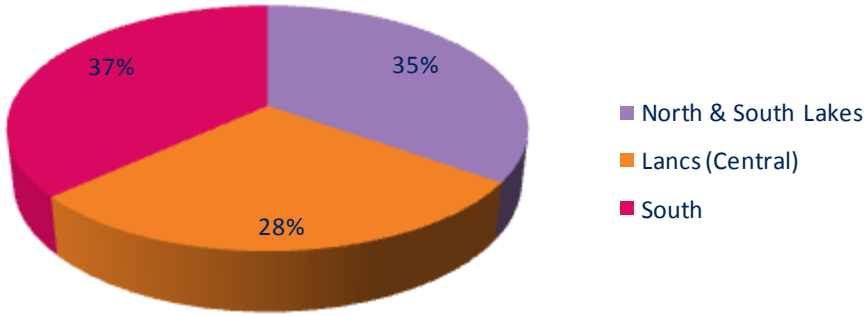
FY16 DG OFFERS BY CONNECTION VOLTAGE



FY18 (YTD) DG OFFERS BY CONNECTION VOLTAGE



FY16 DG OFFERS BY REGION



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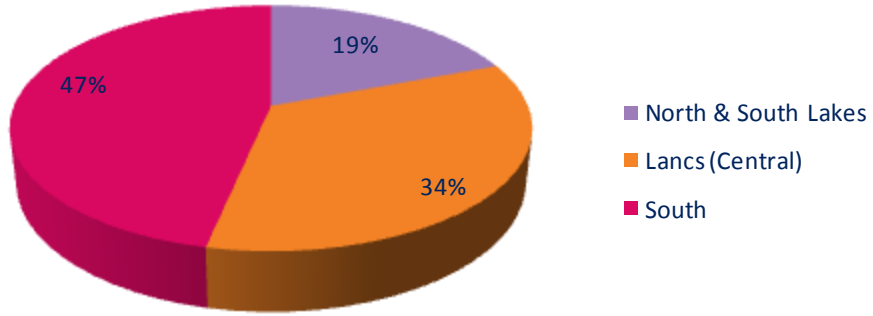

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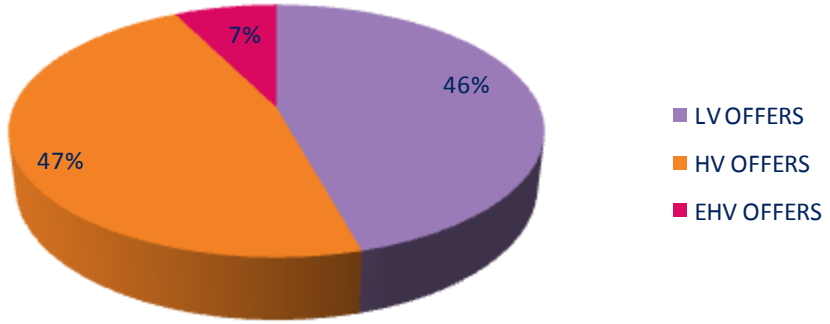

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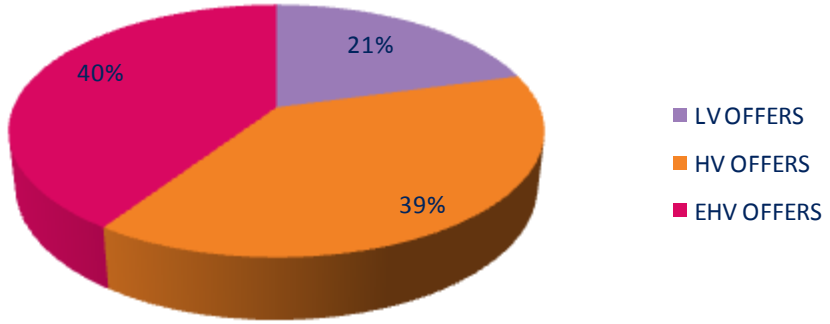
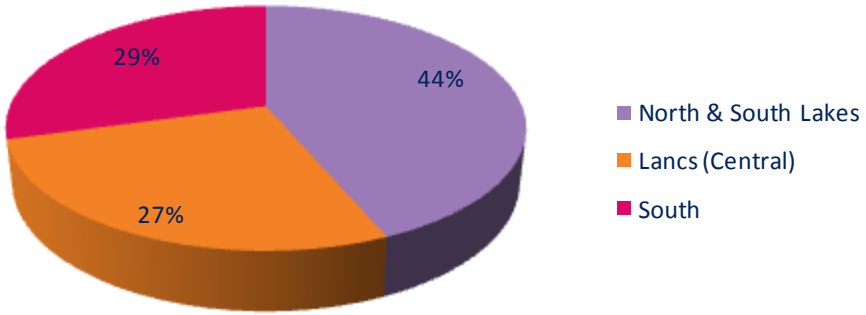
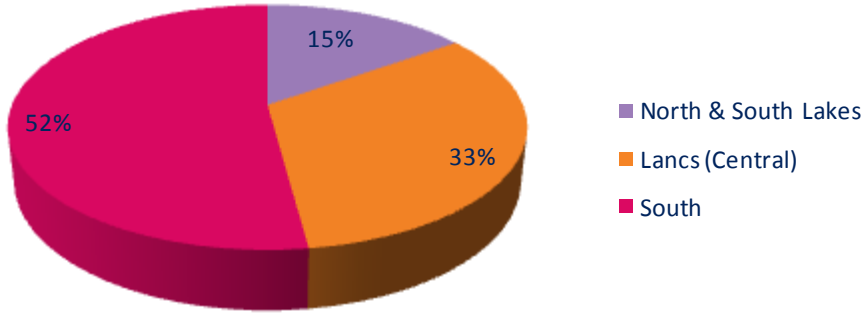


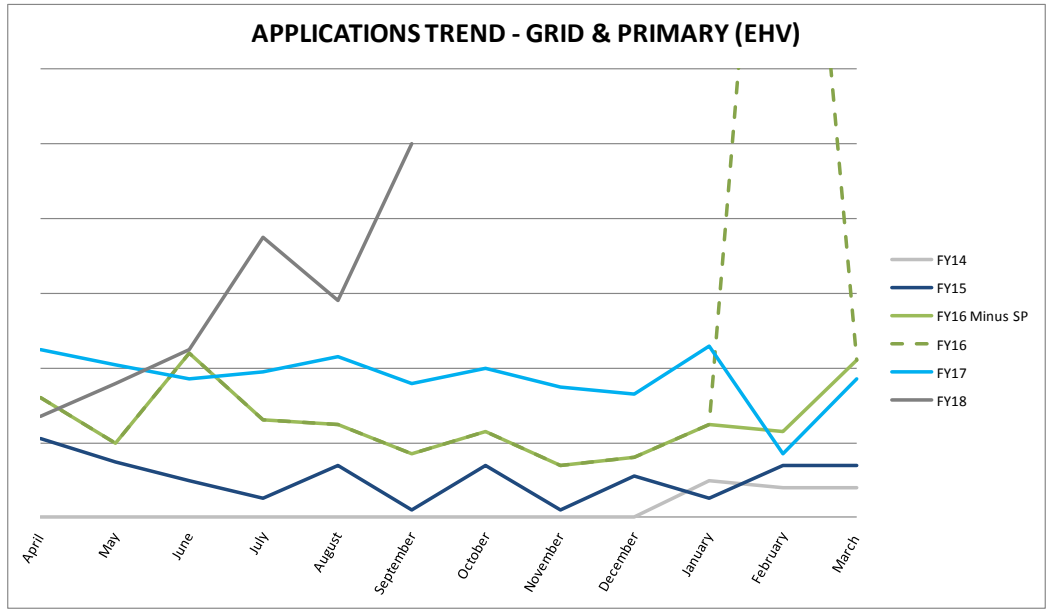
FY16 DG HV & EHV OFFERS BY REGION

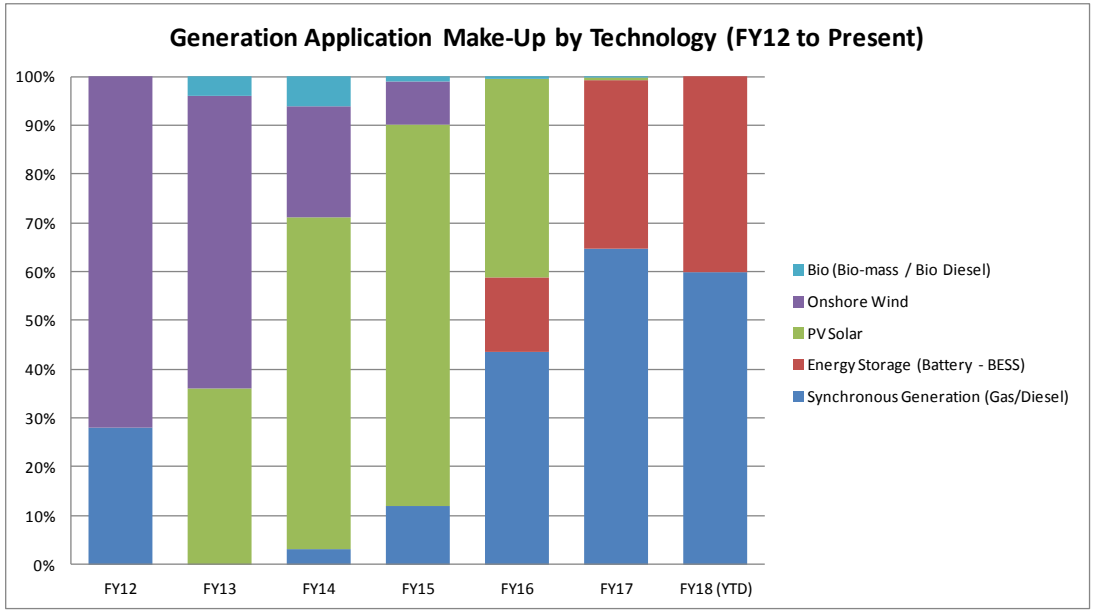


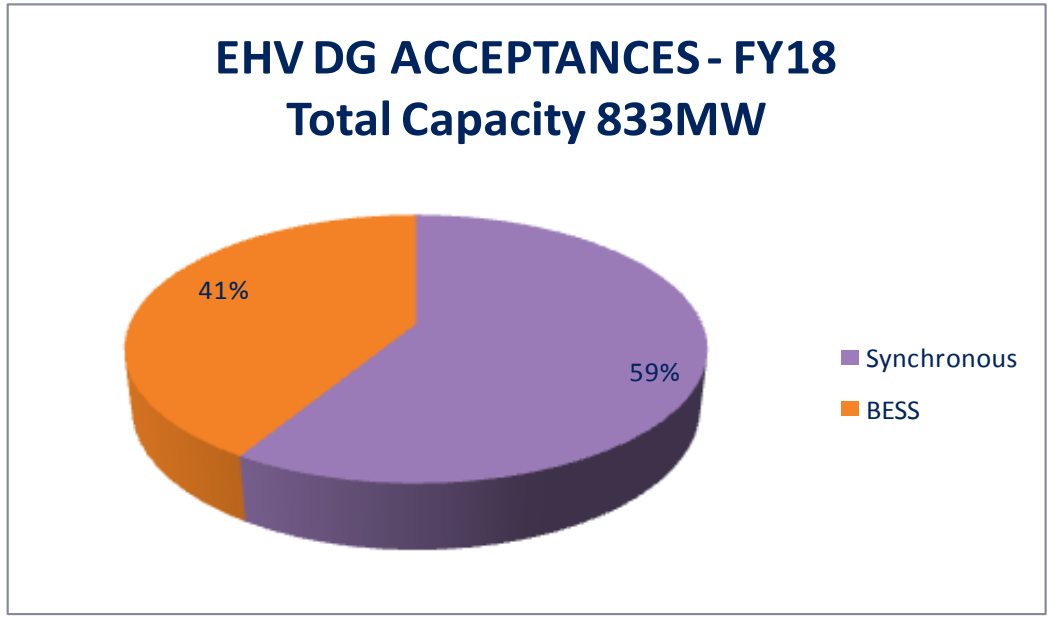
FY18(YTD) DG HV & EHV OFFERS BY REGION

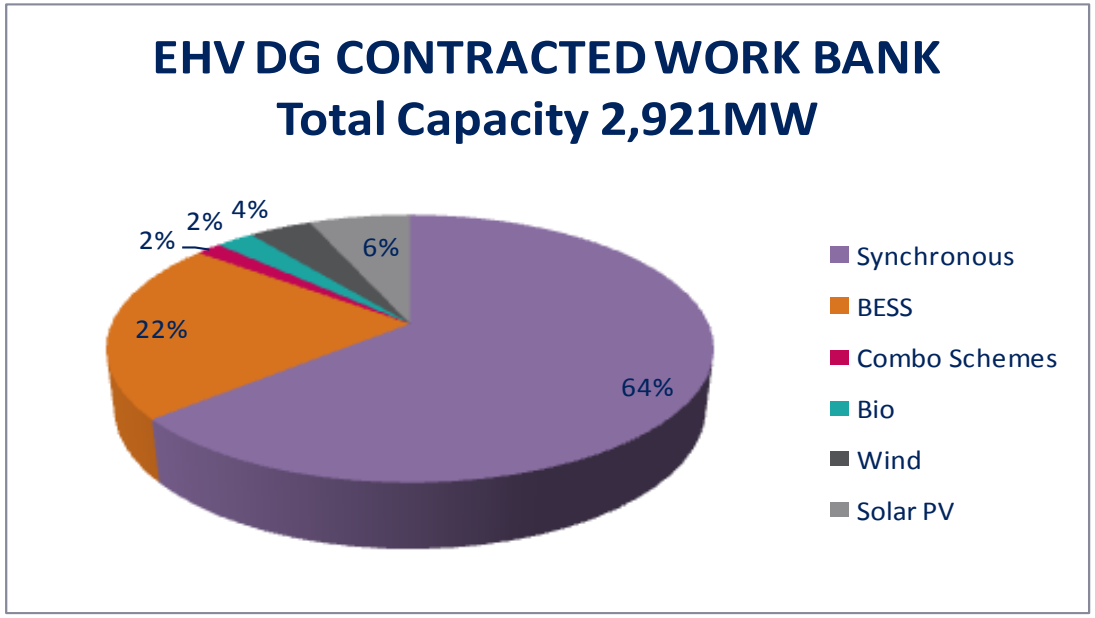


Introduction









Curtailment Index

Agenda

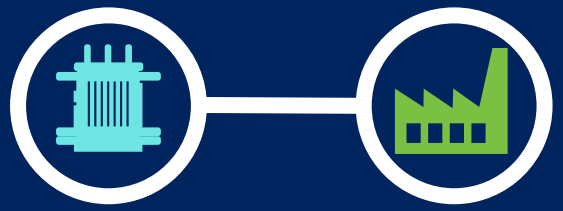
Flexible connections

Curtailment overview

Benefits

Curtailment figures

Annual customer information



Example – HV connection

Questions & Close

Flexible connections

Managed connection

Offered to all new DG connections >200kW at HV and EHV

Offered to new I&C connections where a flexible connection has requested

Post fault demand response

When system normal = ON

When system abnormal = OFF

Triggered at time of system fault and planned outage (ie maintenance and construction)

Remote terminal unit (RTU) is installed at time of connection

Uses 3G technology to communicate with Electricity North West

Curtailment overview

Customers

Curtailment Index contained within new flexible connection offers from 4th December 2017 who have maximum import capacity / maximum export capacity >200kW

Forecast

Forecast based on historical data & planned work

Considers fault, construction & maintenance outages

Provides indication per voltage type of forecast curtailment

Provided to customer with connection quotation

Curtailment index

If customer approaches or exceeds cap ENWL will seek to intervene

Figure is provided as a % and no. of days for a rolling six-year period

Actual curtailment

Customers are provided annually with actual curtailment figures for previous 12 months, and cumulative six-year average

Provided through collation of network data

Curtailment figures

	6.6 & 11kV (HV)	33kV (EHV)	132kV (EHV)
Faults	5 days	15 days	15 days
Maintenance	0.2 days	1.5 days	13.5 days
Construction	4 days	8.3 days	12.5 days
Forecast (based on historical data)	**9.2 days (2.5%)**	**24.8 days (6.8%)**	**41 days (11%)**

Curtailment Index (intervention trigger)	**11.4 days (3.0%)**	**29.8 days (8.2%)**	**49.2 days (13.2%)**

Benefits

- Customer provided with a clear expectation of average interruption to their operations
- Allows network outages to be modelled realistically to aid customers investment decisions
- Curtailment Index provides safe guards against excessive outages or faults

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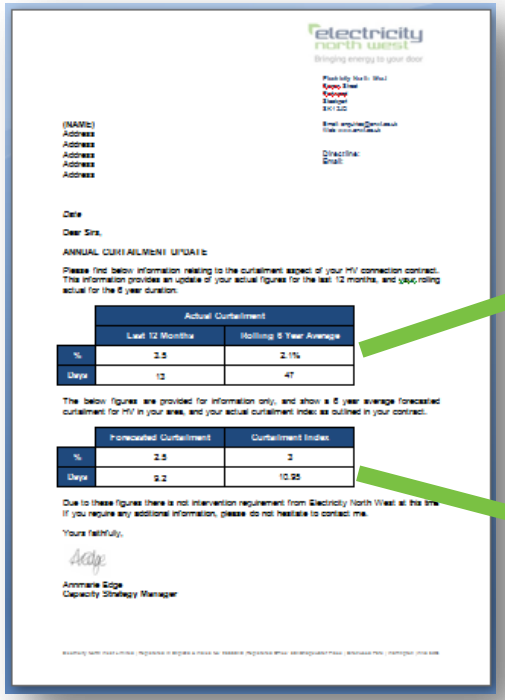
- Clear performance expectation
- It provides an equitable basis for Active Network Management
- Enables introduction of ‘Service Metric and associated investment’ in RIIO ED2
- Exceeds commitments set out within our ICE plan

Annual customer information

At the end of the first full financial year following energisation or commissioning of the RTU, customers will receive a letter providing them with the previous 12 months outage data (April to March), for example: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(NAME)
Address
Address
Address
Address
Address

Date

Dear Sirs,

ANNUAL CURTAILMENT UPDATE

Please find below information relating to the curtailment aspect of your HV connection contract. This information provides an update of your actual figures for the last 12 months, and your rolling actual for the 6 year duration.

	Actual Curtailment	
	Last 12 Months	Rolling 6 Year Average
%	2.5	2.1%
Days	12	47

The below figures are provided for information only, and show a 6 year average forecasted curtailment for HV in your area, and your actual curtailment index as outlined in your contract.

	Forecasted Curtailment	Curtailment Index
%	2.5	3
Days	9.2	10.95

Due to these figures there is not intervention requirement from Electricity North West at this time. If you require any additional information, please do not hesitate to contact me.

Yours faithfully,

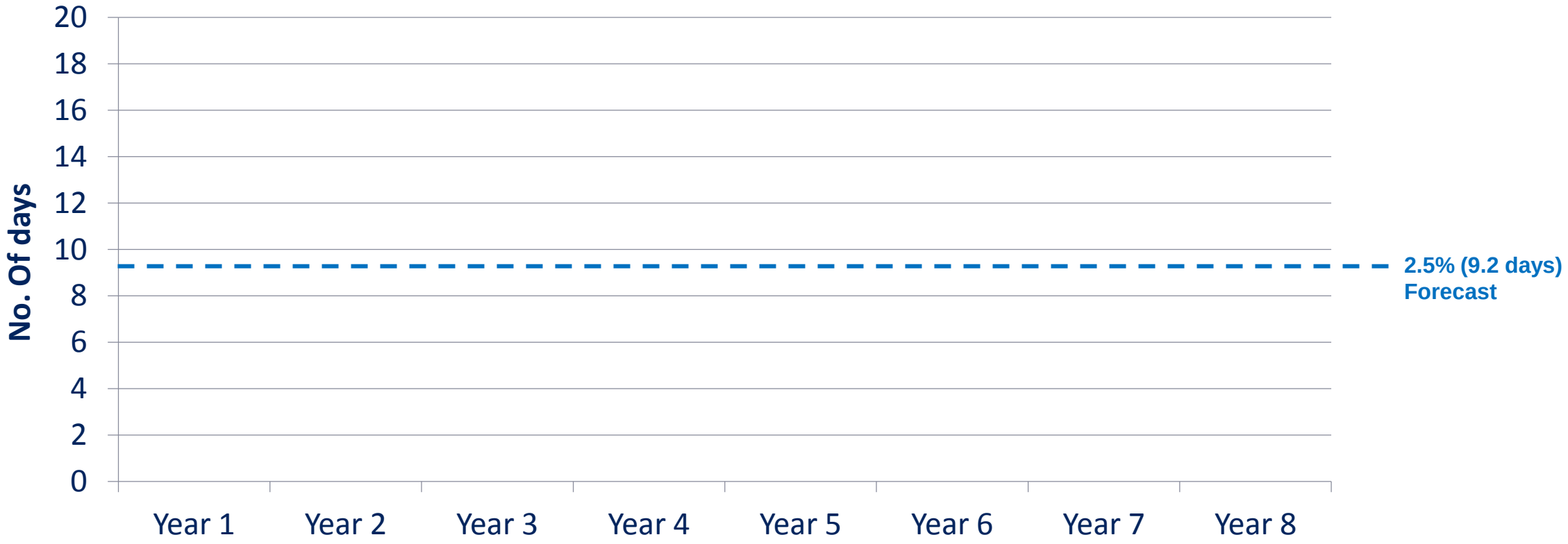
Annmarie Edge
Capacity Strategy Manager

	Actual Curtailment	
	Last 12 Months	6 Year Average*
%	3.0%	1.09% (6 yr average)
Days	11 days	24 days (6 yr cumulative)

	Forecasted Curtailment	Curtailment Index
%	2.5	3
Days	9.2	10.95

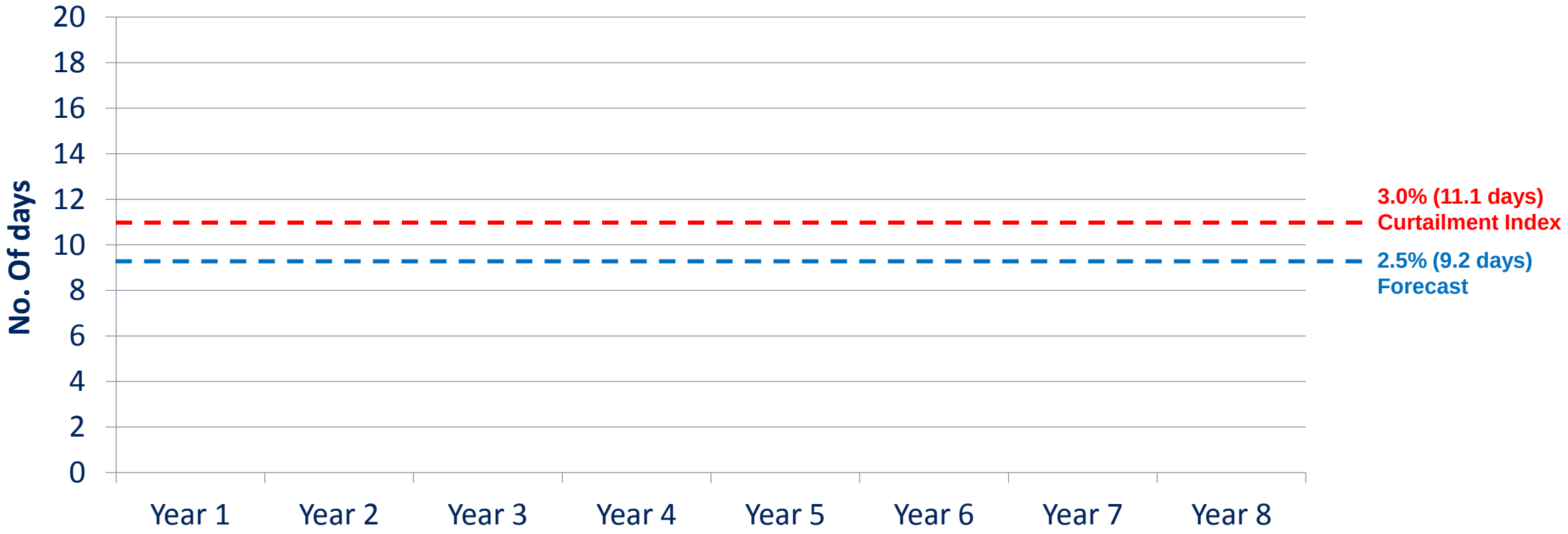
The letter will also indicate whether or not intervention is required due to the figures shown.

Example : HV Network Customer - Energisation -



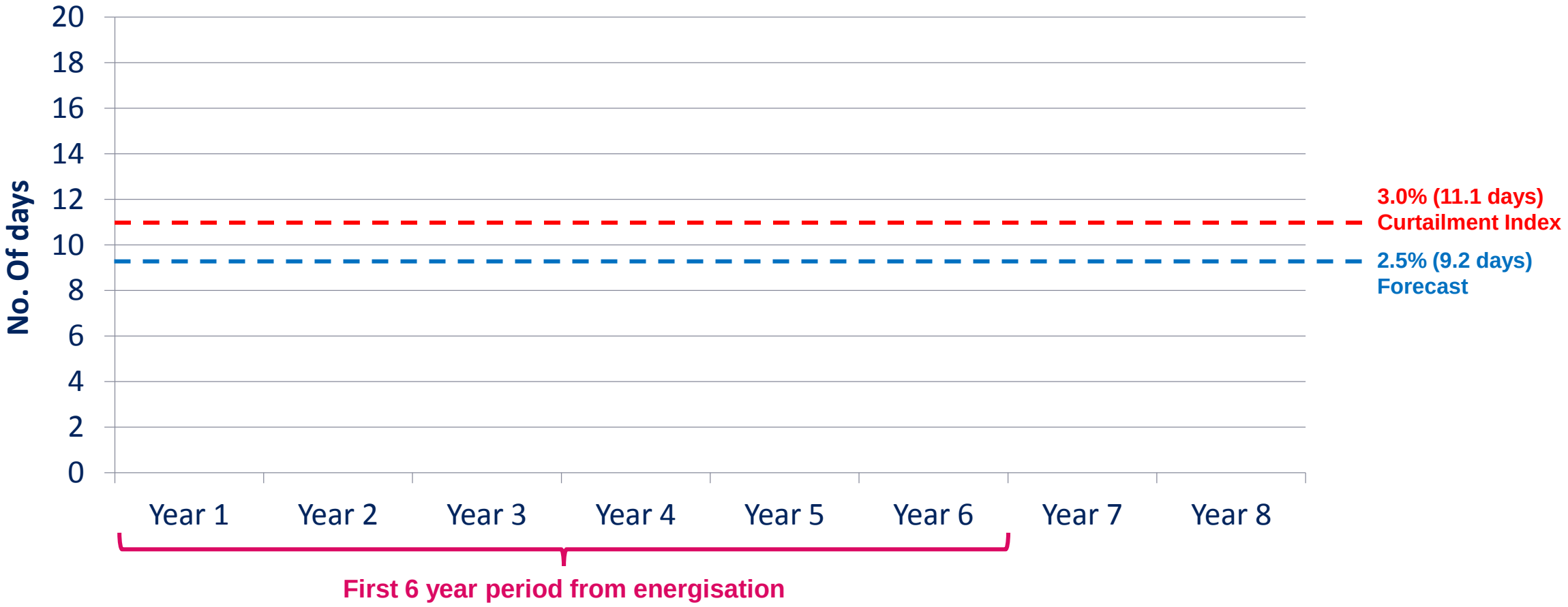
	Percentage %	No. of days
Actual curtailment in year 1		
Actual curtailment		

Example : HV Network Customer - Energisation -



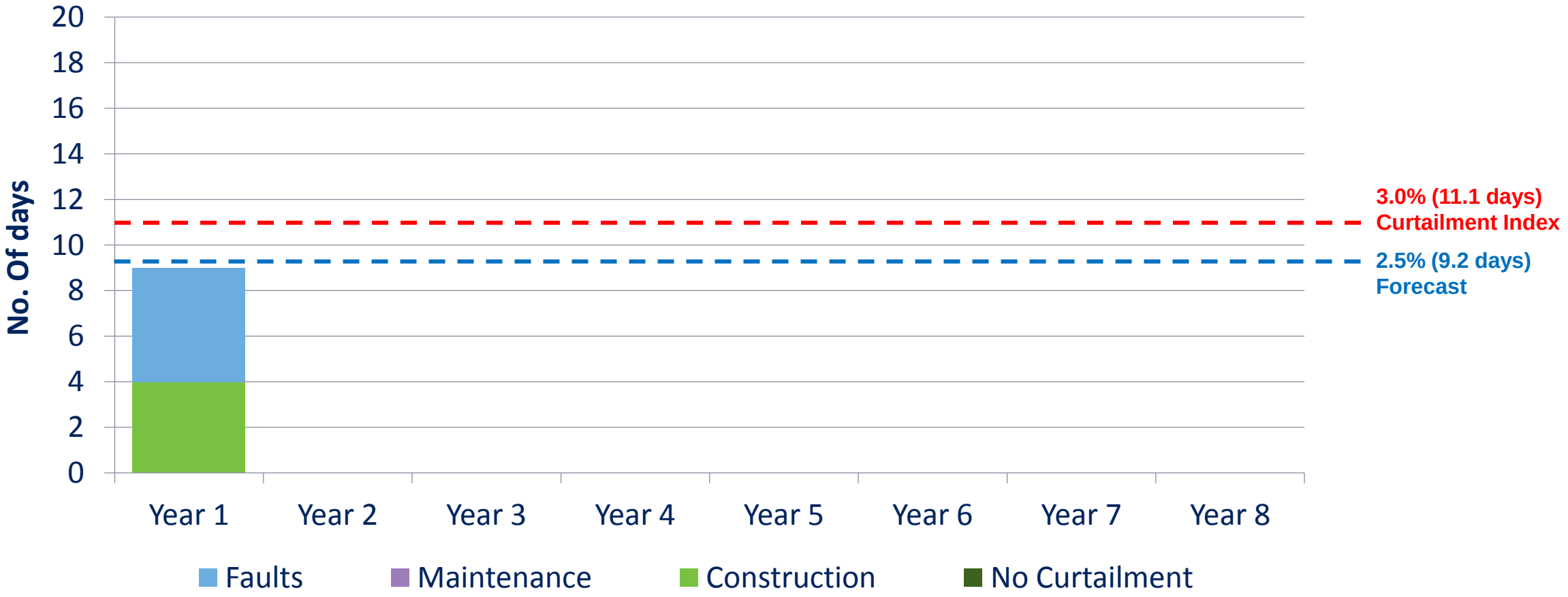
	Percentage %	No. of days
Actual curtailment in year 1		
Actual curtailment		

Example : HV Network Customer - Energisation -



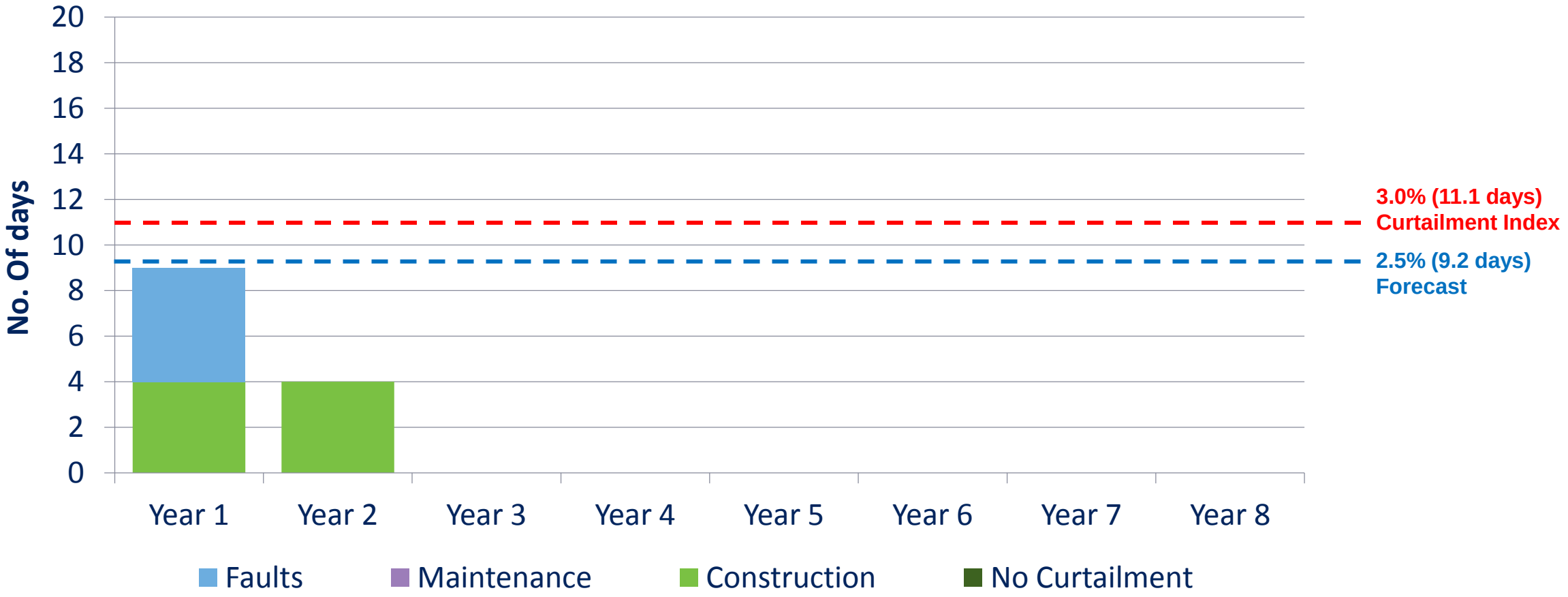
	Percentage %	No. of days
Actual curtailment in year 1		
Actual curtailment		

Example : HV Network Customer - Year 1 -



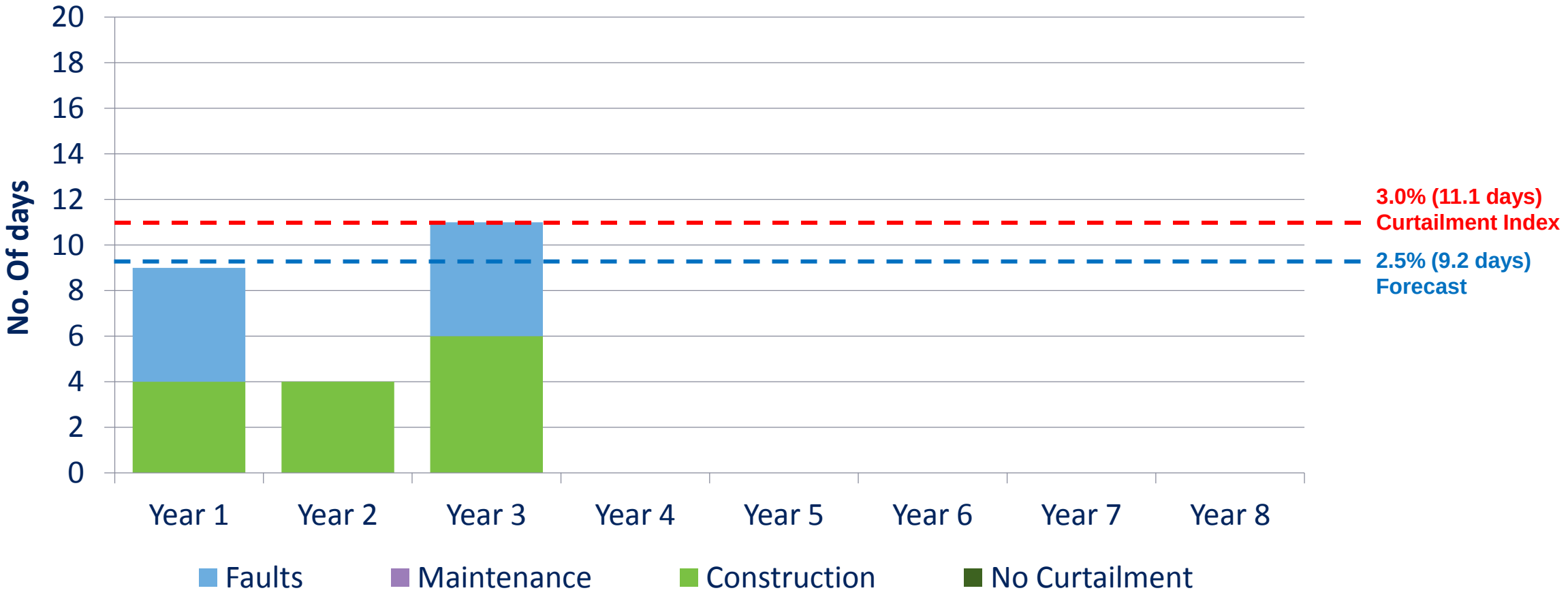
	Percentage %	No. of days
Actual curtailment in year 1	2.5%	9.2 days
Actual curtailment	0.4% (6 yr average)	9.2 days (6 yr cumulative)

Example : HV Network Customer - Year 2 -



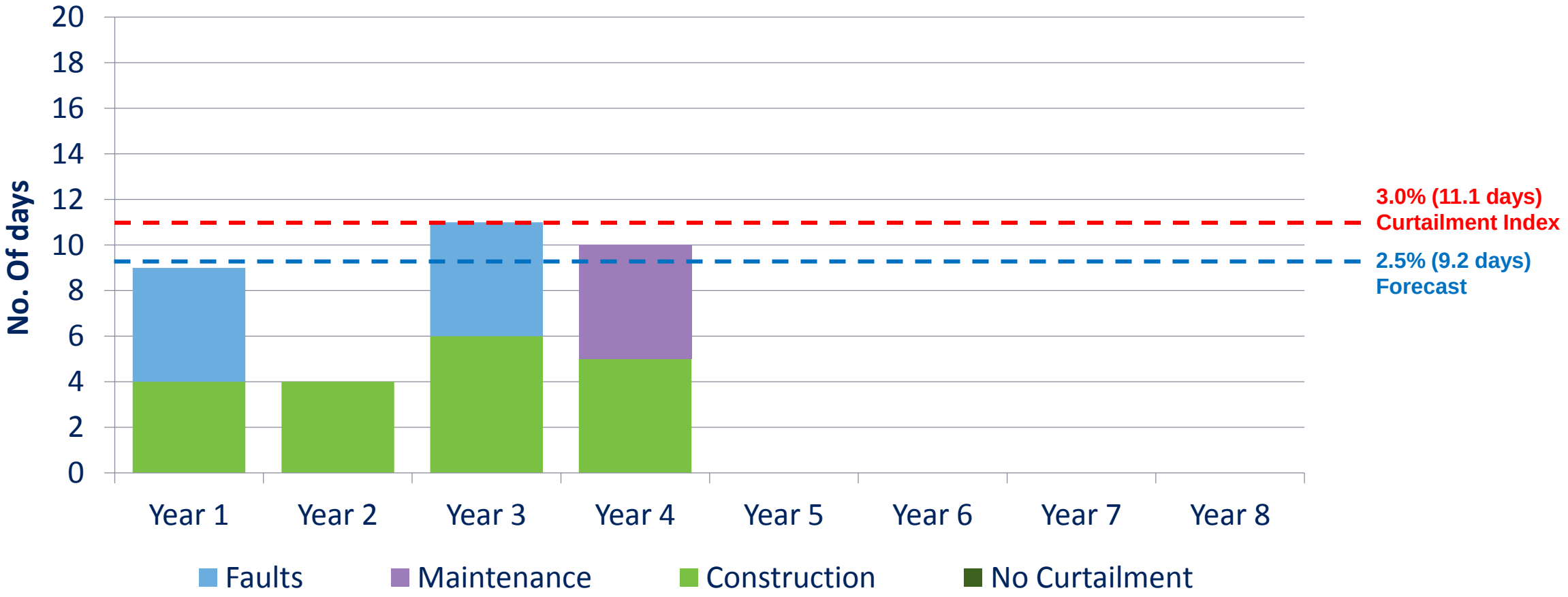
	Percentage %	No. of days
Actual curtailment in year 2	1.09%	4 days
Actual curtailment	0.6% (6 yr average)	13 days (6 yr cumulative)

Example : HV Network Customer - Year 3 -



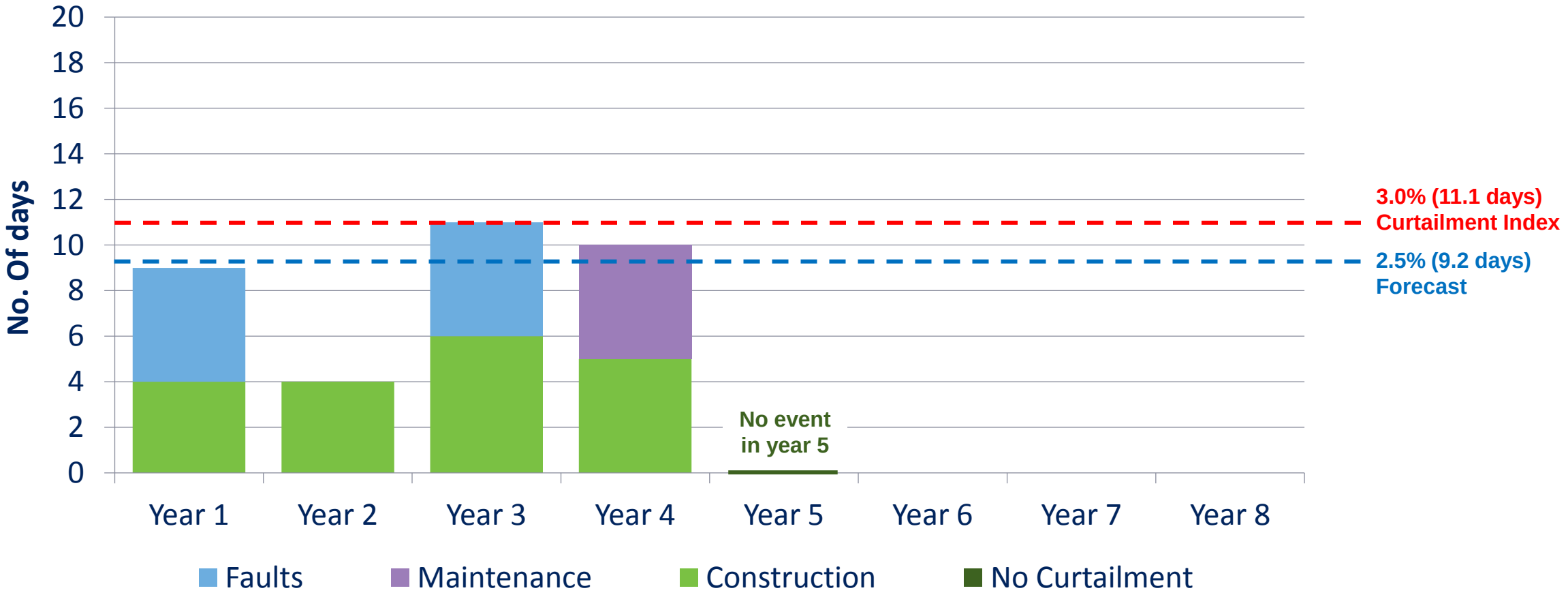
	Percentage %	No. of days
Actual curtailment in year 3	3.0%	11 days
Actual curtailment	1.09% (6 yr average)	24 days (6 yr cumulative)

Example : HV Network Customer - Year 4 -



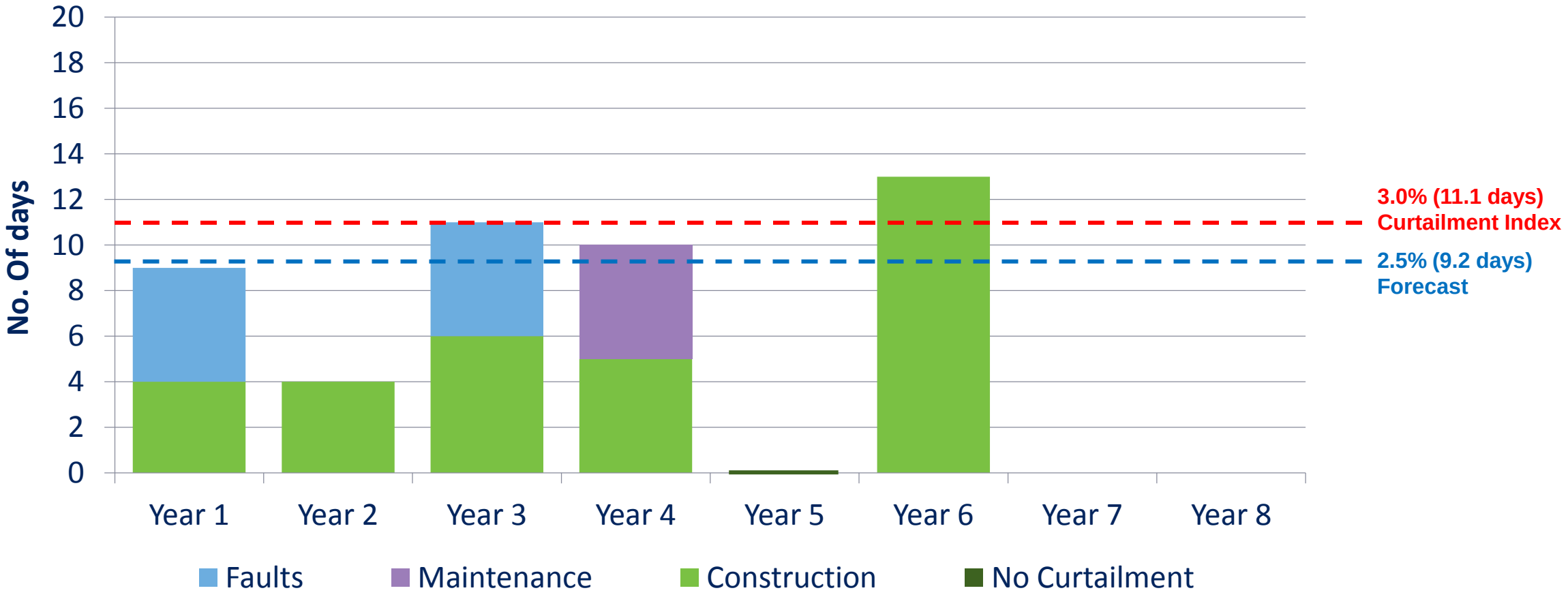
	Percentage %	No. of days
Actual curtailment in year 4	2.7%	10 days
Actual curtailment	1.6% (6 yr average)	34 days (6 yr cumulative)

Example : HV Network Customer - Year 5 -



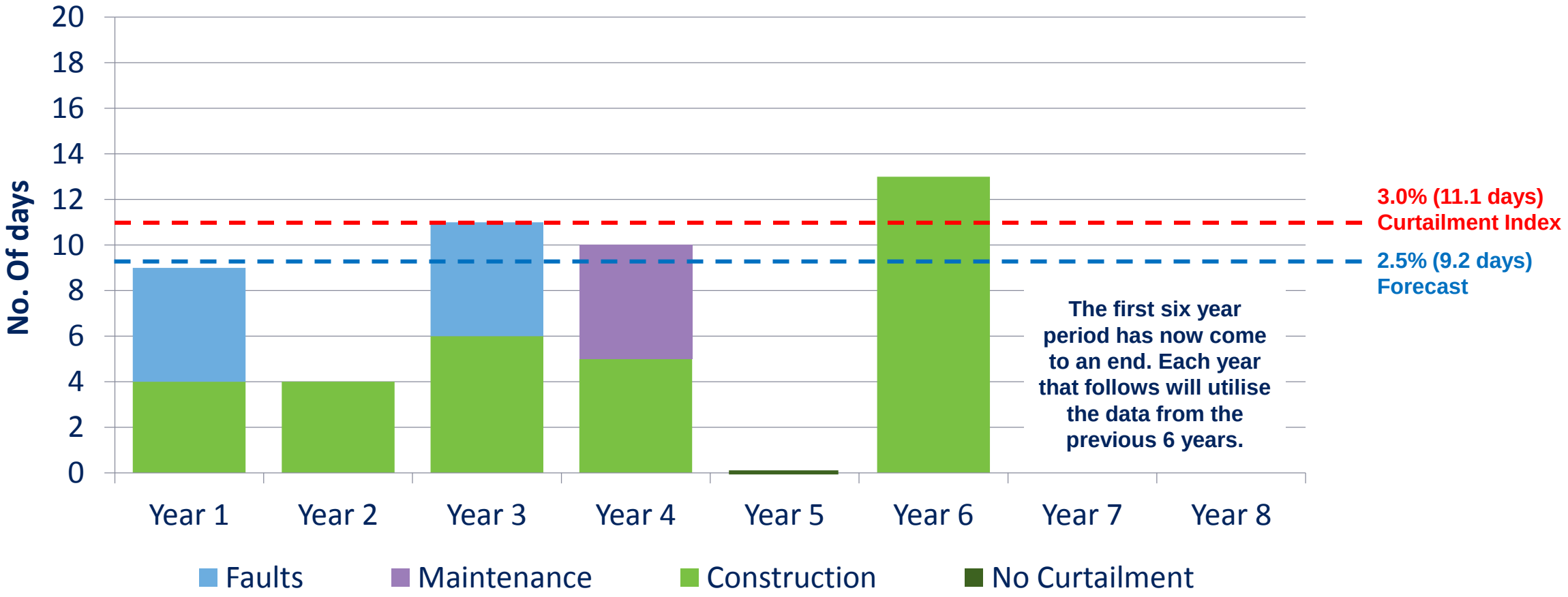
	Percentage %	No. of days
Actual curtailment in year 5	0.0%	0 days
Actual curtailment	1.6% (6 yr average)	34 days (6 yr cumulative)

Example : HV Network Customer - Year 6 -



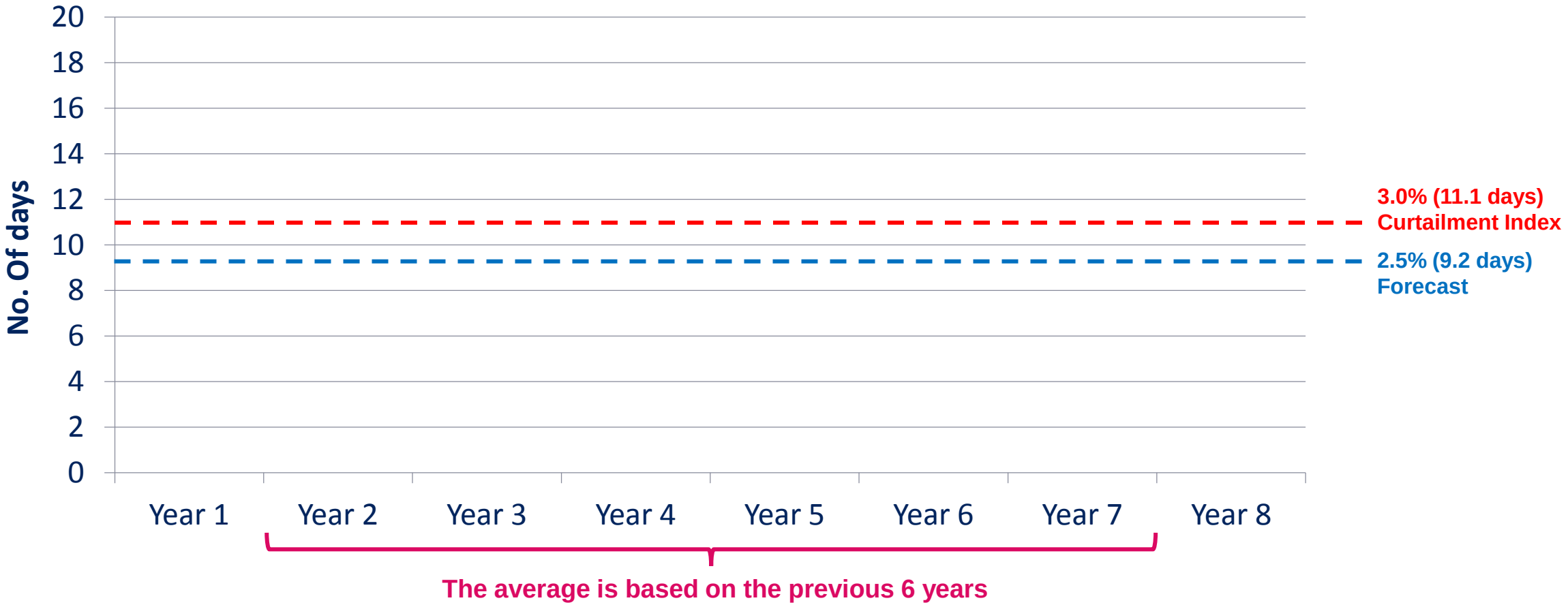
	Percentage %	No. of days
Actual curtailment in year 6	3.5%	13 days
Actual curtailment	2.1% (6 yr average)	47 days (6 yr cumulative)

Example : HV Network Customer - Year 7 -



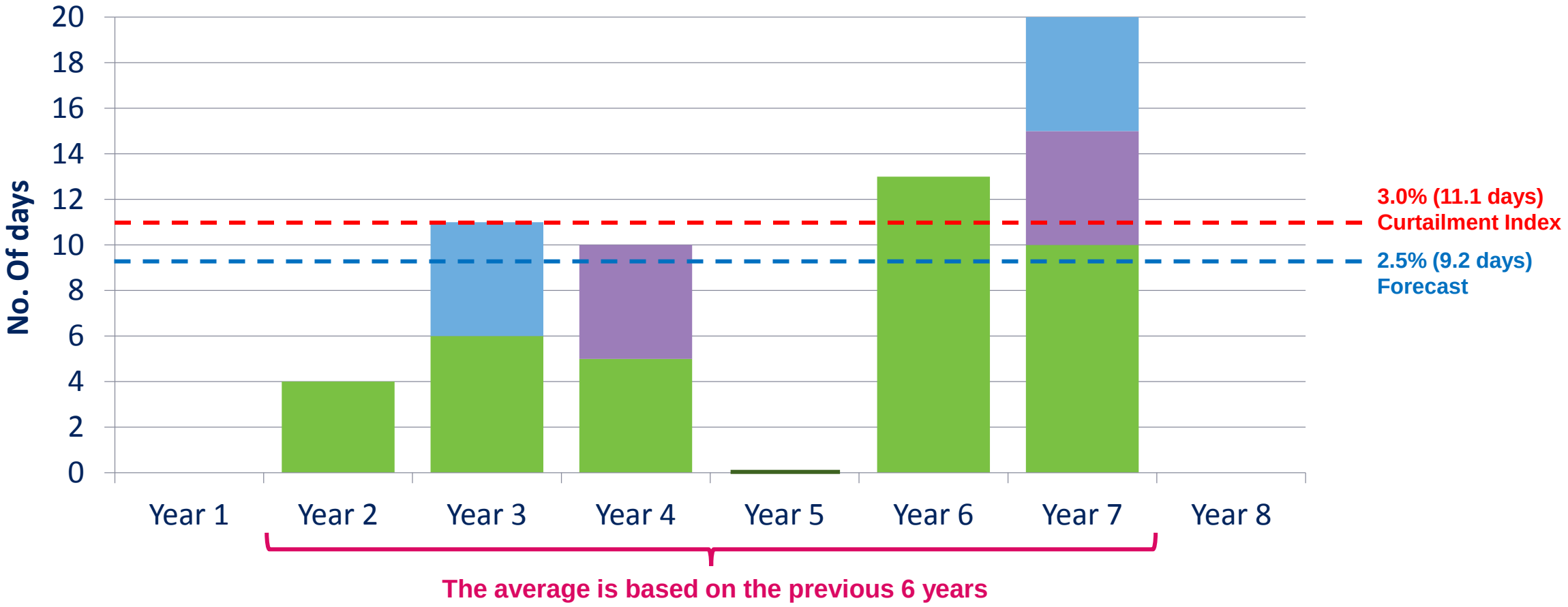
	Percentage %	No. of days
Actual curtailment in year 7		
Actual curtailment		

Example : HV Network Customer - Year 7 -



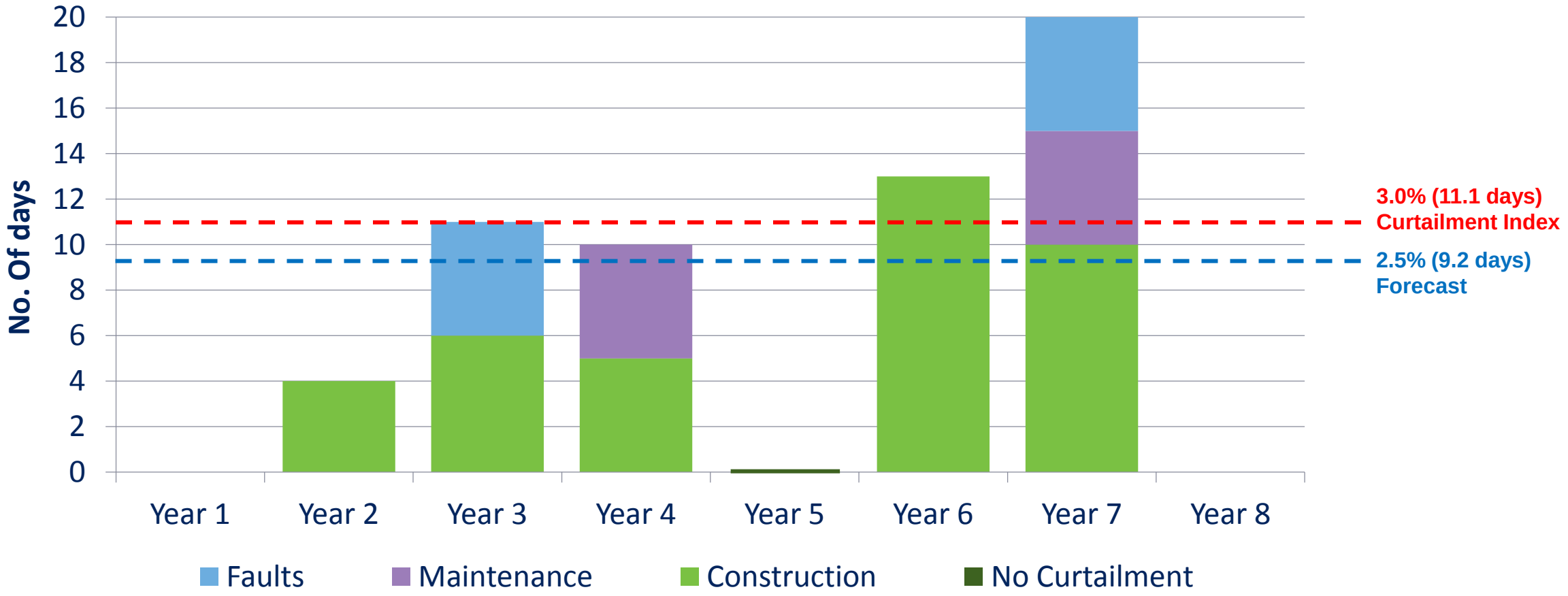
	Percentage %	No. of days
Actual curtailment in year 7		
Actual curtailment		

Example : HV Network Customer - Year 7 -



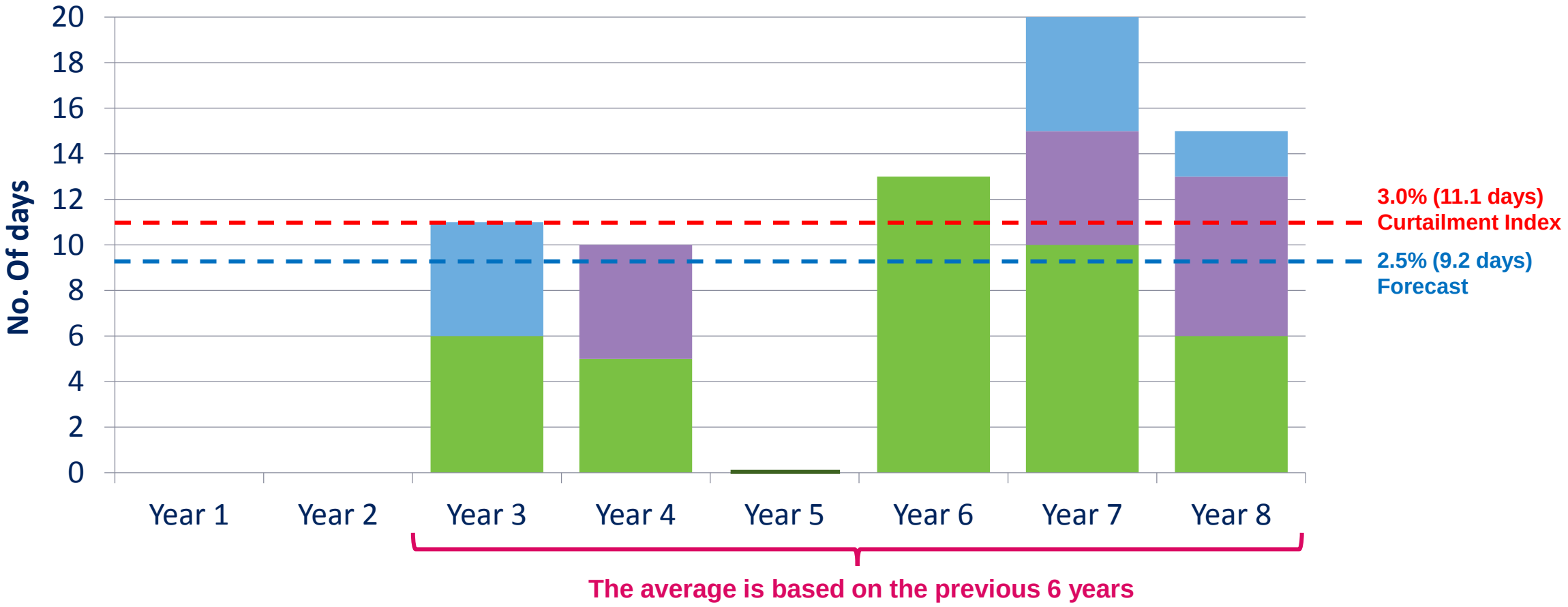
	Percentage %	No. of days
Actual curtailment in year 7	5.4%	20 days
Actual curtailment	2.6% (6 yr average)	58 days (6 yr cumulative)

Example : HV Network Customer - Year 7 -



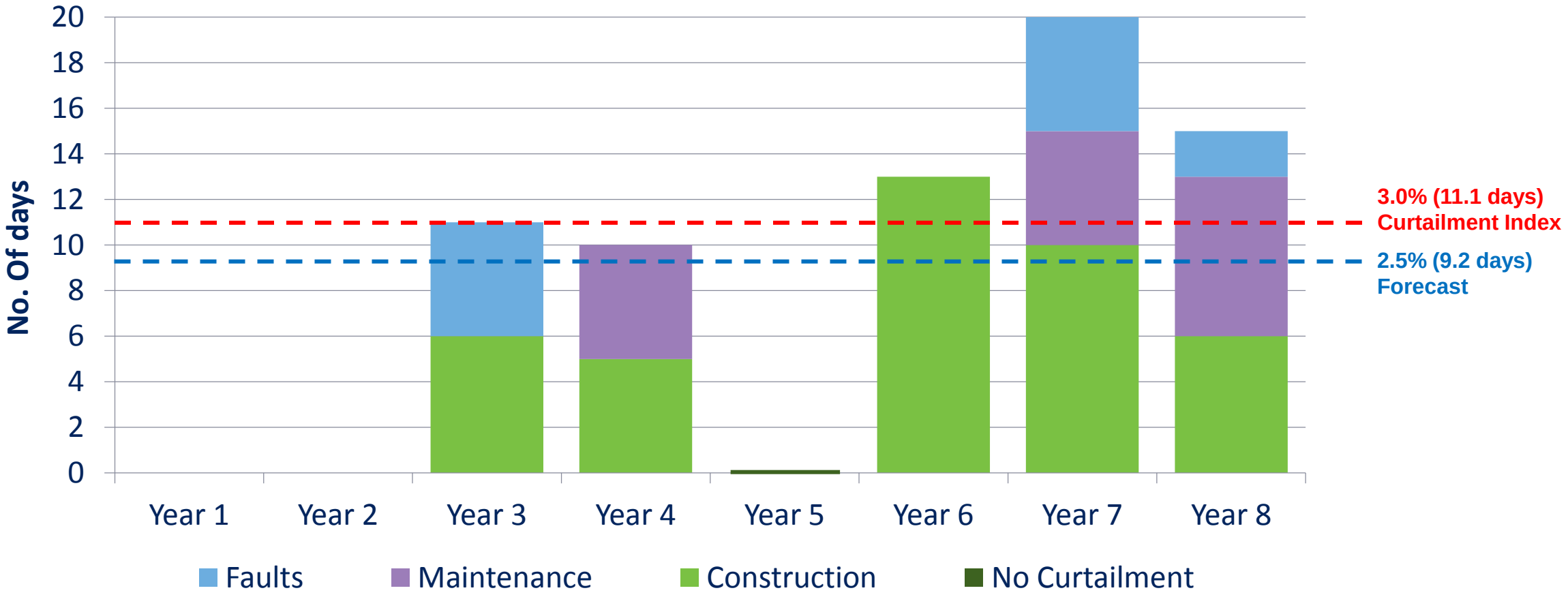
	Percentage %	No. of days
Actual curtailment in year 7	5.4%	20 days
Actual curtailment	2.6% (6 yr average)	58 days (6 yr cumulative)

Example : HV Network Customer - Year 8 -



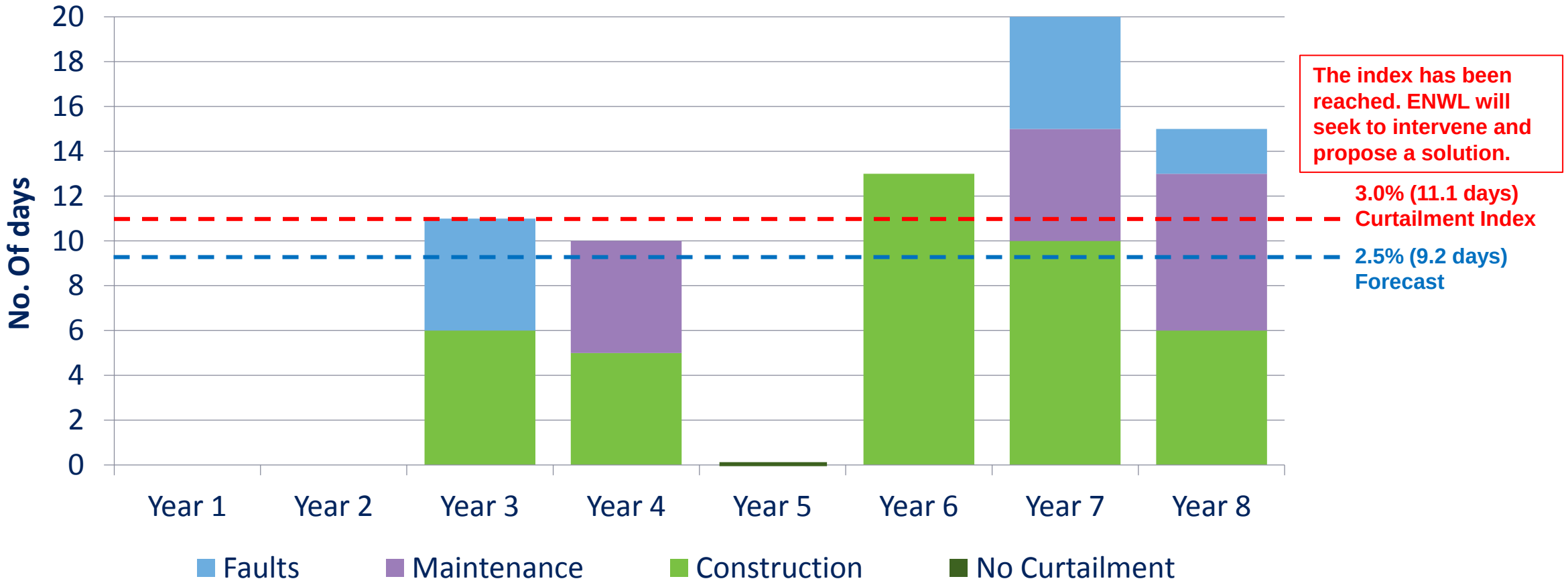
	Percentage %	No. of days
Actual curtailment in year 8	4.1%	15 days
Actual curtailment	3.1% (6 yr average)	69 days (6 yr cumulative)

Example : HV Network Customer - Year 8 -



	Percentage %	No. of days
Actual curtailment in year 8	4.1%	15 days
Actual curtailment	3.1% (6 yr average)	69 days (6 yr cumulative)

Example : HV Network Customer - Year 8 -

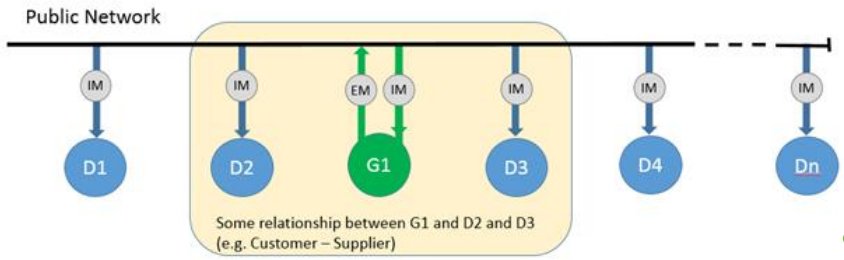


	Percentage %	No. of days
Actual curtailment in year 8	4.1%	15 days
Actual curtailment	3.1% (6 yr average)	69 days (6 yr cumulative)

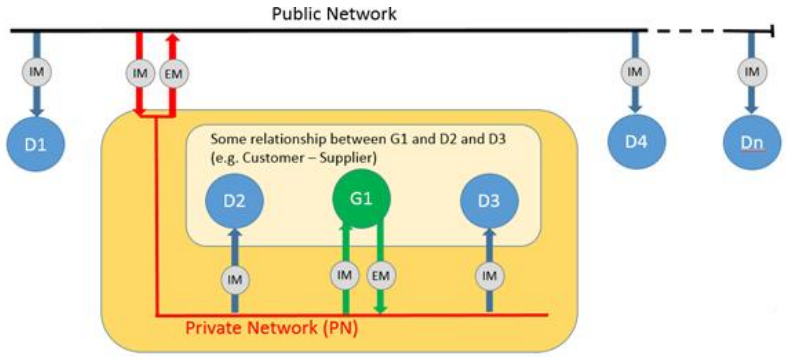
Virtual Private Networks

Local Energy Schemes (Public vs. Private Networks)

Connection in public distribution network



Connection in private wire network

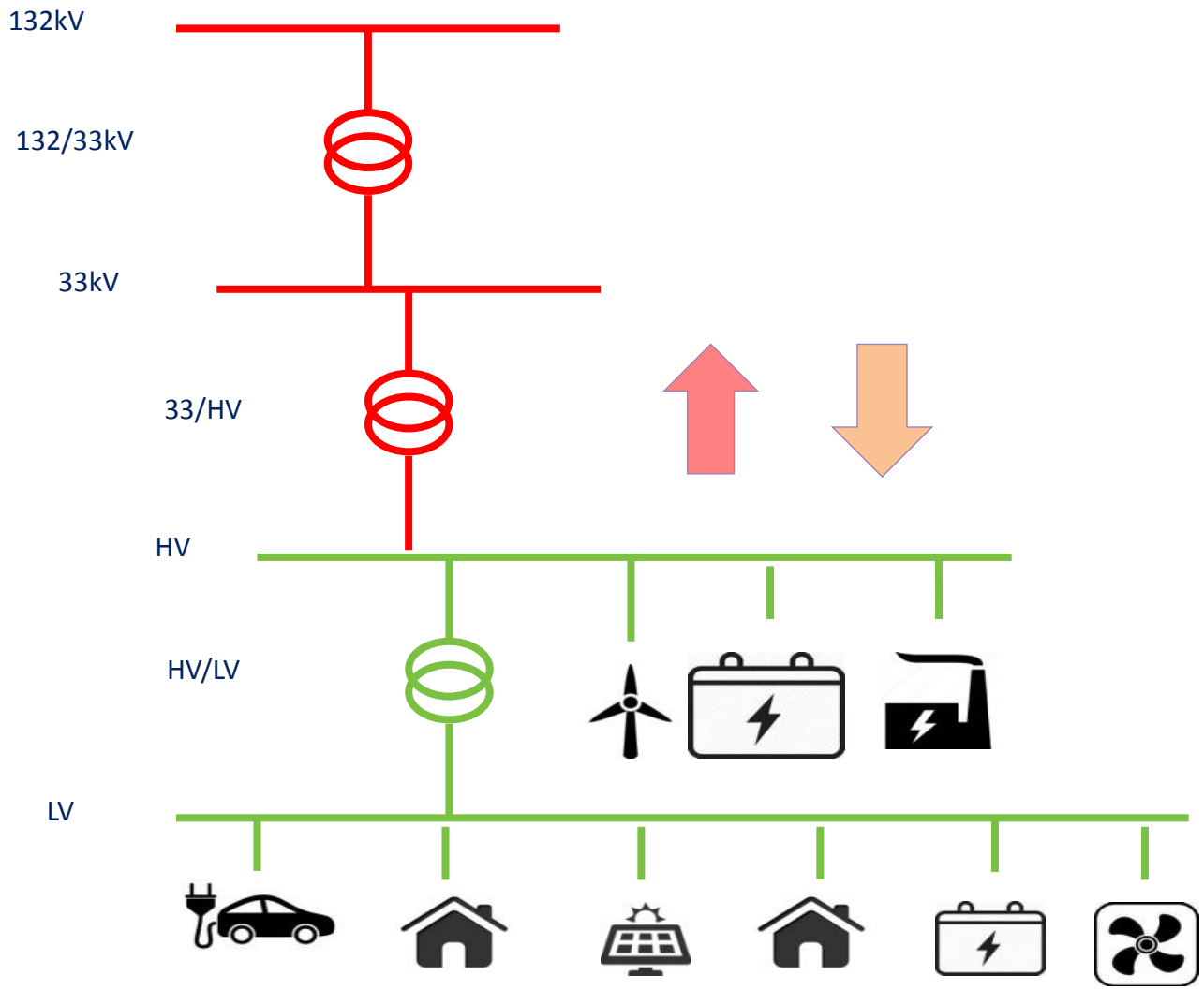


- Local Generation has significant benefits
  - Enhances security of supply - distributed generation
  - Contributes to decarbonisation - usually cleaner / efficient
  - Brings down energy bills - avoiding network reinforcement
- Current market arrangements not designed to recognise benefits of local generation satisfying local demand
- LESs often address this issue by constructing private wire networks
  - Private network seen as a “virtual customer” to the outside world
  - Net Import / Export attributed to the “virtual customer’s” registered Supplier
  - Retain benefits from difference between payments for ‘spill’ and charges for import.
- Unlicensed Private Wire Networks do not provide same consumer protections as licensed DNO networks

Local Energy Scheme

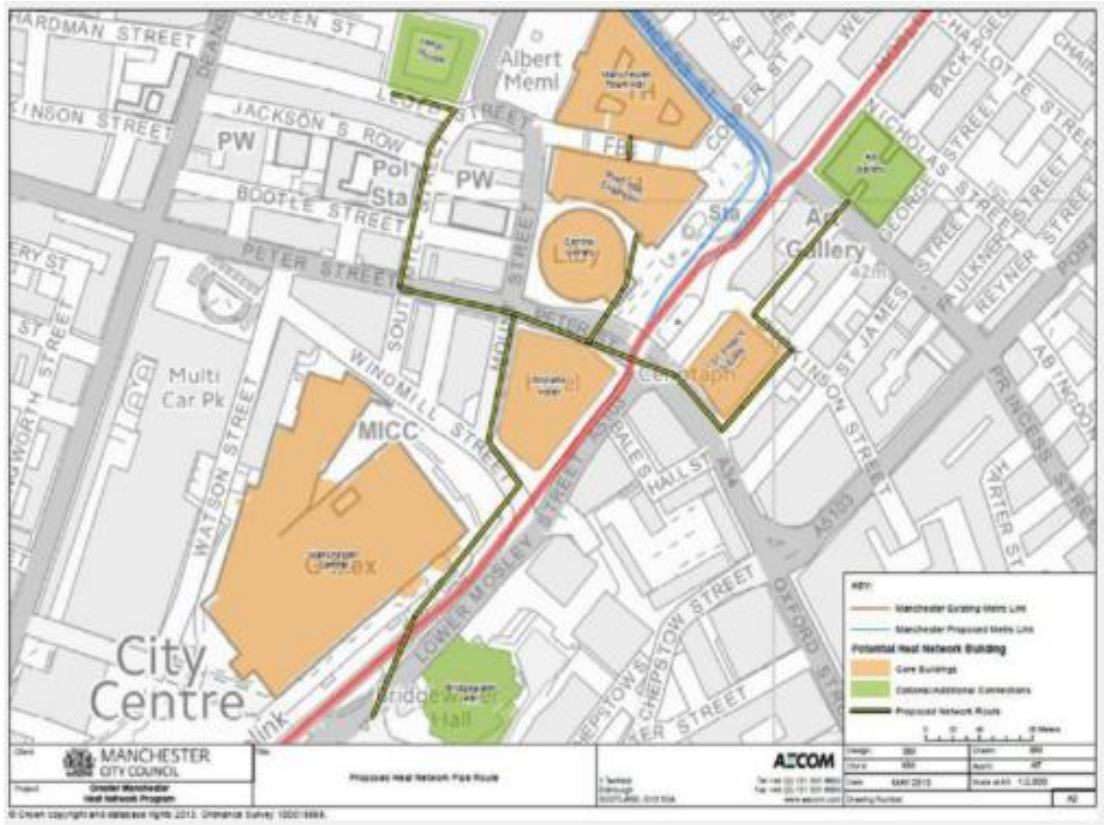
How it works

- Customers connected to same local network (eg primary s/s) eligible for Local Energy Scheme
- Customers charged DUoS through supplier as normal
- A Demand Side Response payment calculated as difference between
  - Normal DUoS
  - Downstream DUoS
  - Upstream DUoS calculated on a net basis
- Approach should allow the supply benefits to be retained



Civic Quarter Heat Network (CQHN) Proposal

- **ENWL/ MCC developed a VPN approach for CQHN instead of a PN solution**
  - Prevents stranding of ENWL assets
  - Reduces risk/ disruption of building PN network
  - Potentially reduces need for network reinforcement
  - Reduces the amount of DUoS paid by CQHN.
  - Derogation needed from licence obligations to undertake trial
- **Ofgem Reaction**
  - Rejected initial request as too broad
  - Minded to reject restricted request: 10 year derogation could conflict with wide ranging charging reviews
  - Encouraged ENWL to find alternative approach of allowing trial to proceed
  - ENWL currently developing an alternative way forward to allow LES approach for CHQN to proceed
  - If successful will look for other areas to deploy solution



Incentive on Connections Engagement

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Q2 update DG 2017-18 work plan

Action	Output/KPI	Performance	Timescale
Improve visibility of our flexible connections	**Output:** All generation quotations will highlight where a flexible connection has been offered	✓ On target	**Q4 2017-18**
Improve constraint data provided with flexible connection quotations	**Output:** Historical data to be provided for all flexible connection quotations. Up to 5 years' data to be provided in accordance with our records	Behind target	**Q2 2017-18**
Facilitate regular engagement sessions	**KPI:** Hold 10 events overall and target 80% of attendees review our events as 'useful' or 'very useful'	✓ On target	**Q4 2017-18**
Implement online application	**Output:** Launch of online application and measure impact via number of applications submitted through the new process. Target 10% of applications to be made online	Complete but delayed	**Q2 2017-18**
Develop a local energy strategy	**Output:** Stakeholder workshops held and draft local energy strategy circulated for ratification	✓ On target	**Q3 2017-18**

Q2 update DG 2017-18 work plan

Action	Output/KPI	Status	Timescale
Champion Virtual Private Networks in industry to support more flexible and efficient connections	**Output:** Develop proposals for Virtual Private Networks	✓ On target	**Q4 2017-18**
Host community energy event	**Output:** Host event and target 80% of attendees reviewing the event as 'useful' or 'very useful'	✓ On target	**Q4 2017-18**
Continue to improve LV time to quote	**KPI:** Target average of 28 Working Days	Current average 32 WD	**Q4 2017-18**
Continue to improve HV time to quote	**KPI:** Target average of 45 Working Days	Current average 42 WD	**Q4 2017-18**
Continue to improve EHV time to quote	**KPI:** Target average of 58 Working Days	Current average 62 WD	**Q4 2017-18**

Q2 update DG 2017-18 work plan

Action	Output/KPI	Status	Timescale
Provide quarterly updates on progress of actions	**Output:** Progress updates published online and distributed via mailing lists. Engage with stakeholders in workshops to monitor effectiveness of these updates, target 80% attendees reviewing our newsletters as 'useful' or 'very useful'	✓ **On target**	**Q4 2017-18**
Develop Community Energy distribution list and share relevant updates	**Output:** We will target a minimum of 50 stakeholders by March 2018 and share newsletter updates on a quarterly basis	✓ **On target**	**Q3 2017-18**
Establish DG owner-operator panel	**Output:** Establish a DG owner-operator panel	✓ **On target**	**Q4 2017-18**
Target improvements in customer satisfaction	**KPI:** Target an average of: 82% satisfaction with delivery 85% overall satisfaction	**Current average** **Delivery satisfaction 77% (2 responses)** **Overall satisfaction 85% (12 responses)**	**Q4 2017-18**

ICE consultation

	ICP/ IDNO	DG	UM Other
2016 Feedback	• T2Q target not ambitious • Point of contact	• No adverse feedback	• No adverse feedback
ENWL Action	• New action in 2016-17 work plan • Tightened targets in 2016-17 • Wrote letter to ICP	• None taken	• None taken
Ofgem Consultation	• Point of contact feedback not addressed	• Customer Satisfaction targets not met • Were they ambitious?	• Unmetered Other T2C targets not met • Were they ambitious?
ENWL Response	• Explained our action in 2016-17 work plan and response to ICP	• Met 25 out of 27 actions • Only DNO to set these targets • Narrowly missed • Statistically significant?	• Met 5 out of 6 actions • Only DNO to set these targets • Narrowly missed

Our strategy

"No visibility of this [engagement strategy]."

	Plan our engagement	Engage with purpose	Act on the learnings	Share the feedback	Strategic alignment	Understand our operating environment
1st round		NOV 16 Workshops Collected feedback	DEC 16 Reviewed feedback Addressed feedback via ICE ideas	DEC 16 Shared ideas: Expert stakeholder panel	JAN 17 Internal review against business plan Addressed feedback via changes to plan	
2nd round		JAN 17 Survey / Workshop Tested work plan	FEB 17 Reviewed feedback & plans Addressed feedback via changes to plans	MAR 17 Shared ideas: Expert stakeholder panel	APR 17 Internal review against business plan Addressed feedback via changes to plan	

You said, we will do

It's important that we can show you how our thinking has developed and where our actions have come from. We review engagement feedback from the previous year to identify key issues and topics and plan our engagement appropriately.

Therefore development of our actions begins well ahead of our engagement. Each of our actions can be traced back to your feedback and each has been checked and endorsed by stakeholders in subsequent events.

Your feedback	Sponsors / Where?	2017/18 commitment
You told us that it can be difficult to find relevant policy documents online. Policy information was voted in our workshops as one of the most important types of information we make available and therefore should be quick to locate and access. However current tools and navigation can slow the process. "The documents themselves are clear but finding them is difficult" SMS PLC workshop, October, 2016	Workshop	We will improve the navigability of our policy documents online, to make it easier for stakeholders to locate and use information
You told us that it's important to continue to holding training for contestable processes to encourage ICPs to take up new options. Attendance at our training sessions have been lower than we expected, but are still regarded as highly valuable for those attending (majority willing to attend again). "Training/workshops on POC determination. It isn't good enough to say 'we did some workshop in Jan' people come and go from companies and people in time will need a refresh" Future Utility Solutions, workshop October, 2016	Workshop	We will continue to facilitate workshops and training sessions for ICPs working in our area.
Feedback from our workshops and expert stakeholder panels suggests that the service we provide in our Training Academy could be improved. You told us that availability of courses, provision of new bespoke courses and response times could all be improved.	Workshop	We will undertake a trial Training Needs Analysis (TNA) with a minimum of two ICPs in our area to improve training services/planning with a view to facilitating quicker access to training
Rising customer expectations mean that ICPs are coming under new pressure to respond quicker and compete with others in the market. We understand these pressures and are looking to continue improving our service.	Where? Follow on from 2016/17	We will continue to tighten our average LV and HV Time to Quote and Time to Connect targets

What's important to you

- Where should we focus?
- What's important to you?

Estates & Wayleaves

updated

Capacity availability

Payment options

updated

Communication (delivery)

Network information

Flexible connections

Time to Quote

Application process

Statement of Works
&
Network Constraint Update

electricity north west
Bringing energy to your door

Statement of Works Update

- We have a number of Grid Interface Nodes located around our region where our network is connected to National Grids transmission system
- We refer to these as Grid Supply Points (GSPs) and the majority interface with our 132kV network, however, there are a couple that connect in to the 33kV system
- We also have one area of 132kV network where the connection to the NGET infrastructure is solely located on the ScottishPower network
- We continue to work with Nation Grid under the “traditional” Statement of Works process utilising “bulk submissions”
- Over the last 10 months we have worked closely with National Grid and now have responses to SoW submissions on 15 of our 17 GSP’s

GSP Transmission Issues

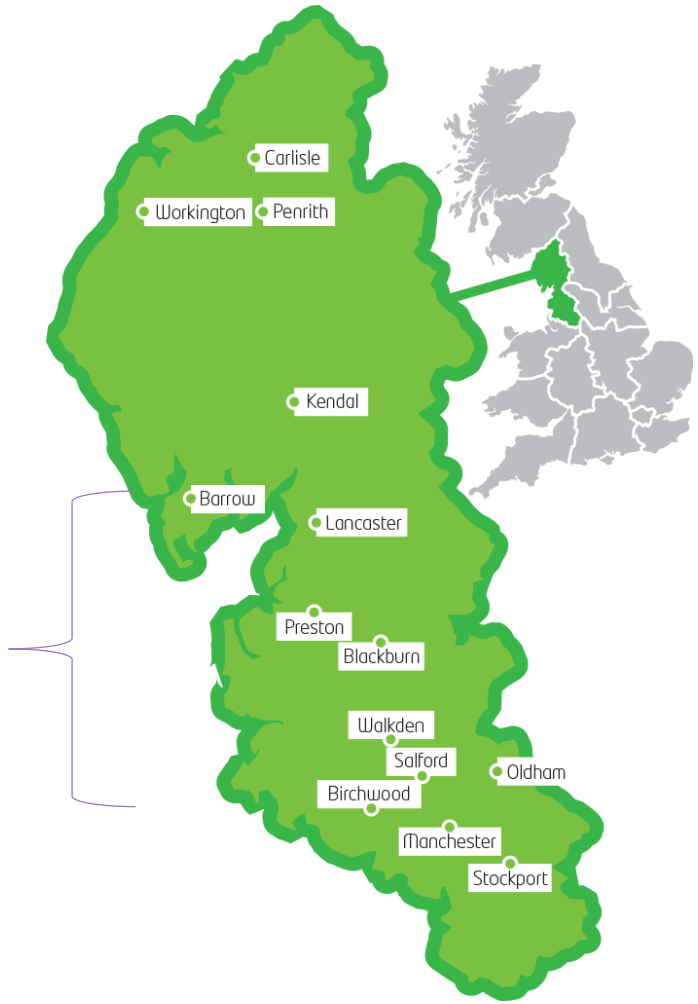
Lakes

- 3 GSP's Harker, Hutton and Heysham
- Thermal restrictions on Harker-Hutton - 4x SGT changes at Harker
- Thermal concerns at Hutton - SGT overloading further studies required

GSP Transmission Issues

Lancs & Central

- 8 GSP's Stanah, Penwortham (E&W), Rochdale, Padiham, Washway Farm, Kearsley and Kearsley Local. Also Bold (SP)
- Fault Level restrictions on Kearsley - 6x 275kV C/B changes
- Thermal restrictions on Padiham, Rochdale and Penwortham East - SGT change at Rochdale



GSP Transmission Issues

South

- 6 GSP's Whitegate, Stalybridge, Carrington, South Manchester, Bredbury, Macclesfield Super Grid
- Fault Level restrictions on Carrington- 4x 275kV C/B changes
- Fault Level restrictions on Stalybridge - 2x 275kV C/B changes

ENWL Constraint Areas

Cumbria

- 132kV Network Reinforcement
- Penrith & Shap Fault Level
- Stainburn & Siddick Fault Level

Central & Lancs

- Thornton / Stanah - Capacity Limitation
- 132kV Network Reinforcement - Blackburn / Lower Darwen
- Peel - Capacity Limitation
- Preston - Fault Level
- Lancaster - Fault Level
- Skelmersdale - Fault Level
- Kearsley - Fault level

South

- Carrington - Fault Level
- Chadderton - Fault Level
- Stalybridge - Fault Level

Panel Q&A