Commission for
Communications Regulation

WORKSHOP ON THE PRACTICAL APPLICATION OF REMEDIES IN THE ZONE B MODERN INTERFACE ('MI') WHQA MARKET

12 September 2018

Information contained within this Presentation this is based on ComReg's preliminary views, as set out in the Further Consultation.
ComReg is still considering Respondents' views, hence, this presentation does not prejudge the outcome of this consideration

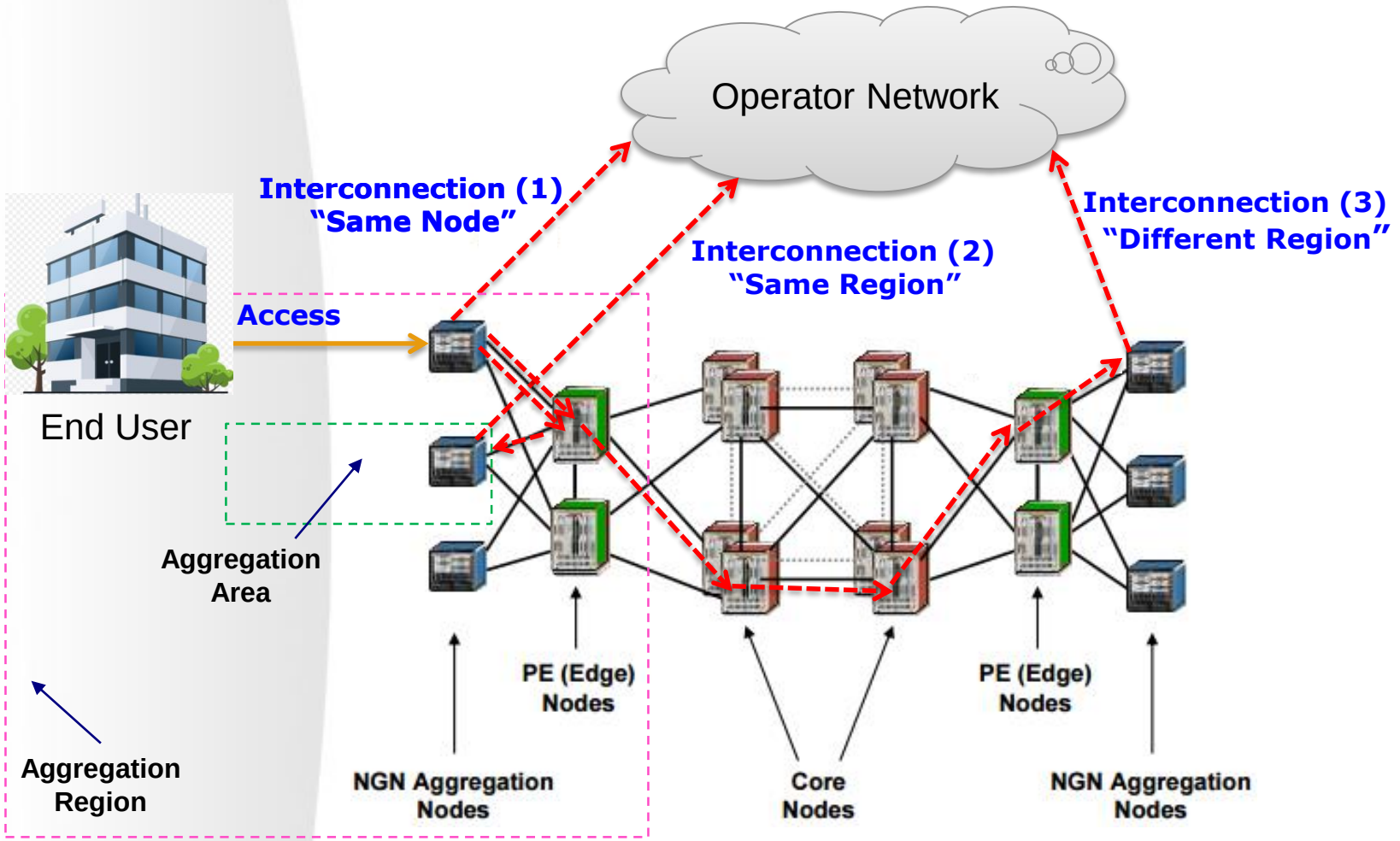
Agenda

1) Terminology
2) ComReg's Proposal (Further Consultation, paragraphs 4.257 – 4.259)
3) MI WHQA Market – Aggregation Regions (Figure 23, Appendix 9)
4) Regulated MI WHQA NGN Ethernet Service
   - Regulated NGN Ethernet Logical Service (Figure 24, Appendix 9)
   - Pricing Perspective
5) MI WHQA WDM service
   - Regulated MI WHQA WDM Service (Figure 25, Appendix 9)
6) WHQA Market - NGN Ethernet Aggregation Regions
7) Validated Questions

Terminology (1)

- **Trunk Nodes** are Eircom NGN Exchanges where there are two or more alternate infrastructures present, within sufficient proximity to allow at least two alternate Service Providers interconnect.
- **Non-Trunk Nodes** are Eircom NGN Exchanges where there are less than two alternate infrastructures present.
- '**Zone A'** signifies those geographic parts of an Aggregation area where Eircom is not subject to SMP obligations.
- '**Zone B'** signifies those geographic parts of the Aggregation area where Eircom is subject to SMP obligations.

Terminology (2)



ComReg's Proposal

(Further Consultation, paragraphs 4.257 – 4.259)

4.257 ComReg has proposed that an appropriate node for handover/interconnection will be at the following three points on Eircom's network:

(a) The connected premises parent Trunk Node[412]; or

(b) At the connected premises parent Non-Trunk node (where the AS can achieve interconnection at this point) or

(c) Where the connected premises is connected to a Non-Trunk Node as in (b) above, Eircom should handover the service at an Aggregation Node located at either of the corresponding Edge Node exchanges within the Aggregation Region (all Edge Node exchanges are included in the proposed list of Trunk-Node).

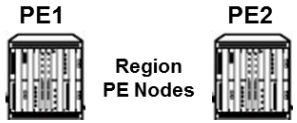
4.258 The following restrictions would also apply:

(a) Eircom will not be obliged to convey traffic higher into its network than to a competitive Trunk-Node (where this is the parent node of the connected premises), or if the parent trunk node is not competitive, then the obligation extends to conveying the traffic to the trunk node co-located with the parent edge node of the demanding traffic; and

(b) Eircom will not be obliged to convey any traffic between Aggregation Regions.

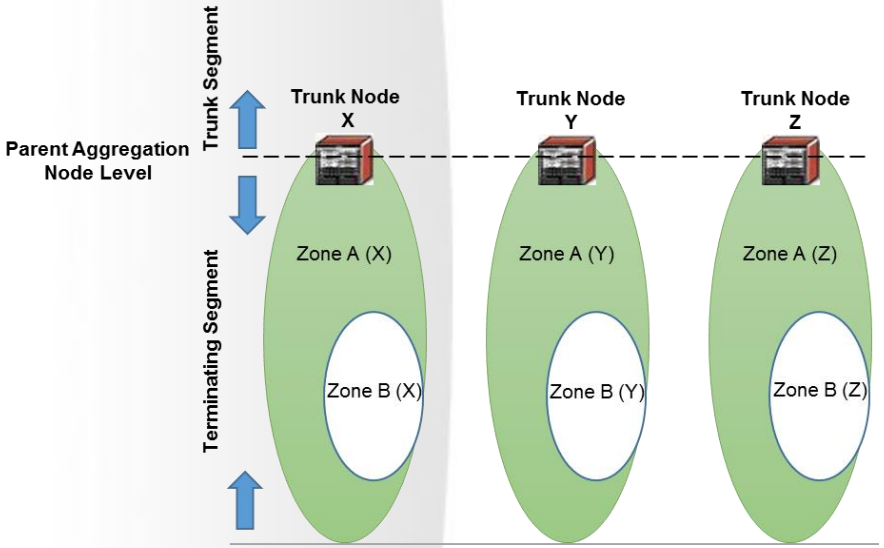
4.259 Moreover, it should also be noted from the outset that Eircom is obliged to provide interconnection services at the Trunk Node locations, even though they are - by definition - part of the competitive geographic market – Zone A. This is because if Access Seekers cannot interconnect at the Trunk Node, it is not possible for them to effectively compete in Zone B or in the related retail Leased Lines markets.

MI WHQA Market – Aggregation Regions (Figure 23, Appendix 9)



Zone A — Aggregation area where Eircom is not subject to SMP obligations

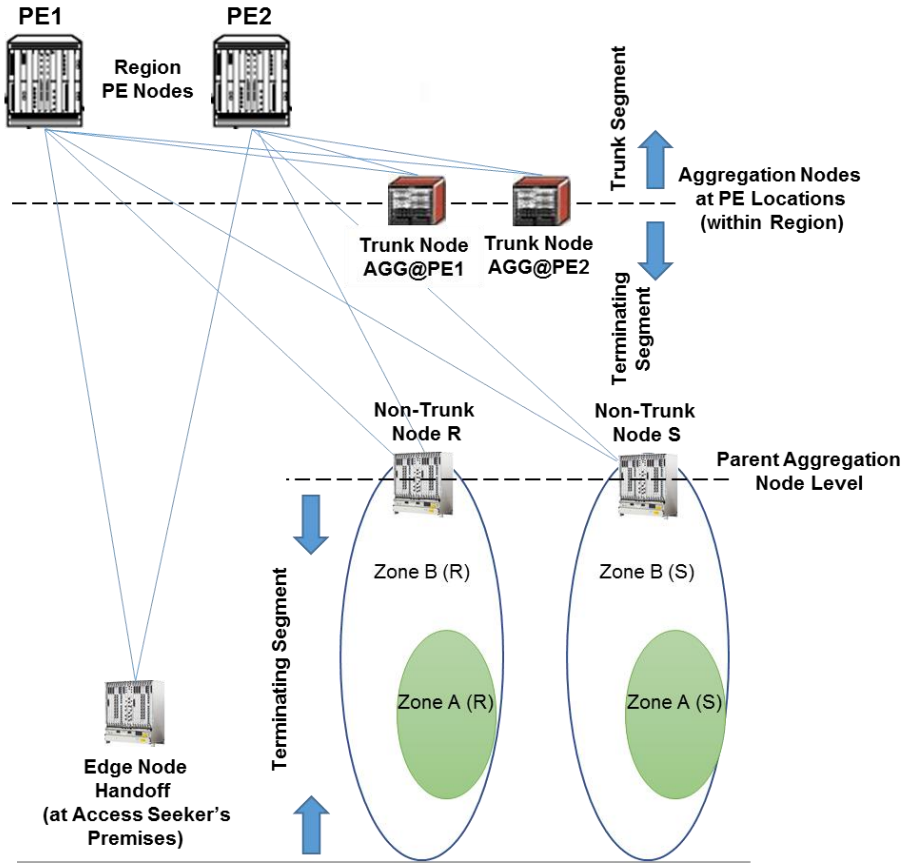
Zone B — Aggregation area where Eircom is subject to SMP obligations



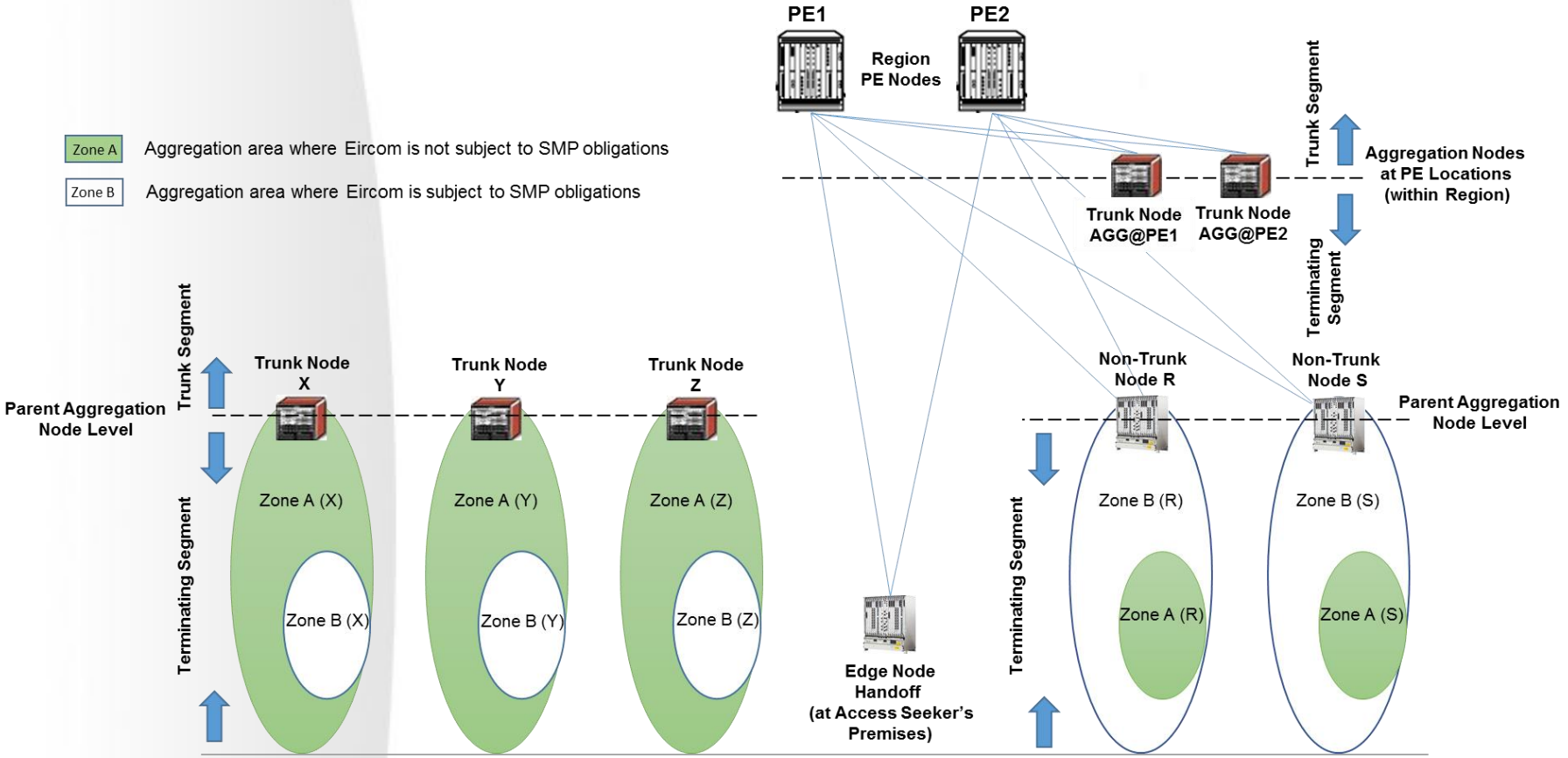
MI WHQA Market – Aggregation Regions (Figure 23, Appendix 9)

Zone A — Aggregation area where Eircom is not subject to SMP obligations

Zone B — Aggregation area where Eircom is subject to SMP obligations



MI WHQA Market – Aggregation Regions (Figure 23, Appendix 9)



Operators can enter into commercial terms with Open Eir for backhaul service where the regulated obligations no longer pertains.

MI WHQA Market Aggregation Region
Regulated MI WHQA NGN Ethernet Service

Commission for Communications Regulation

Physical Circuits

WEIL (NGN Ethernet Interconnection circuit) is always regulated in Zone A and Zone B.

WSEA Physical (NGN Ethernet Access circuit) is always regulated in Zone B.

Logical Circuits (originating in Trunk Node area)

WES (NGN Ethernet logical service) from Zone B (X) WSEA to Trunk Node X is regulated.

The regulated logical service must terminate on a WEIL (CSH, IBH, ISH) at Trunk Node X (Zone A or Zone B) i.e. the associated Aggregation Node;

Logical Circuits (originating in Non-Trunk Node area)

Regulated **WES** from Zone B (R) WSEA to

(a). WEIL (CSH, IBH, ISH) on Non-Trunk Node R

OR

(b). WEIL (CSH, IBH, ISH) on either of the two Trunk Nodes located at the PE exchanges (AGG@PE1, AGG@PE2)

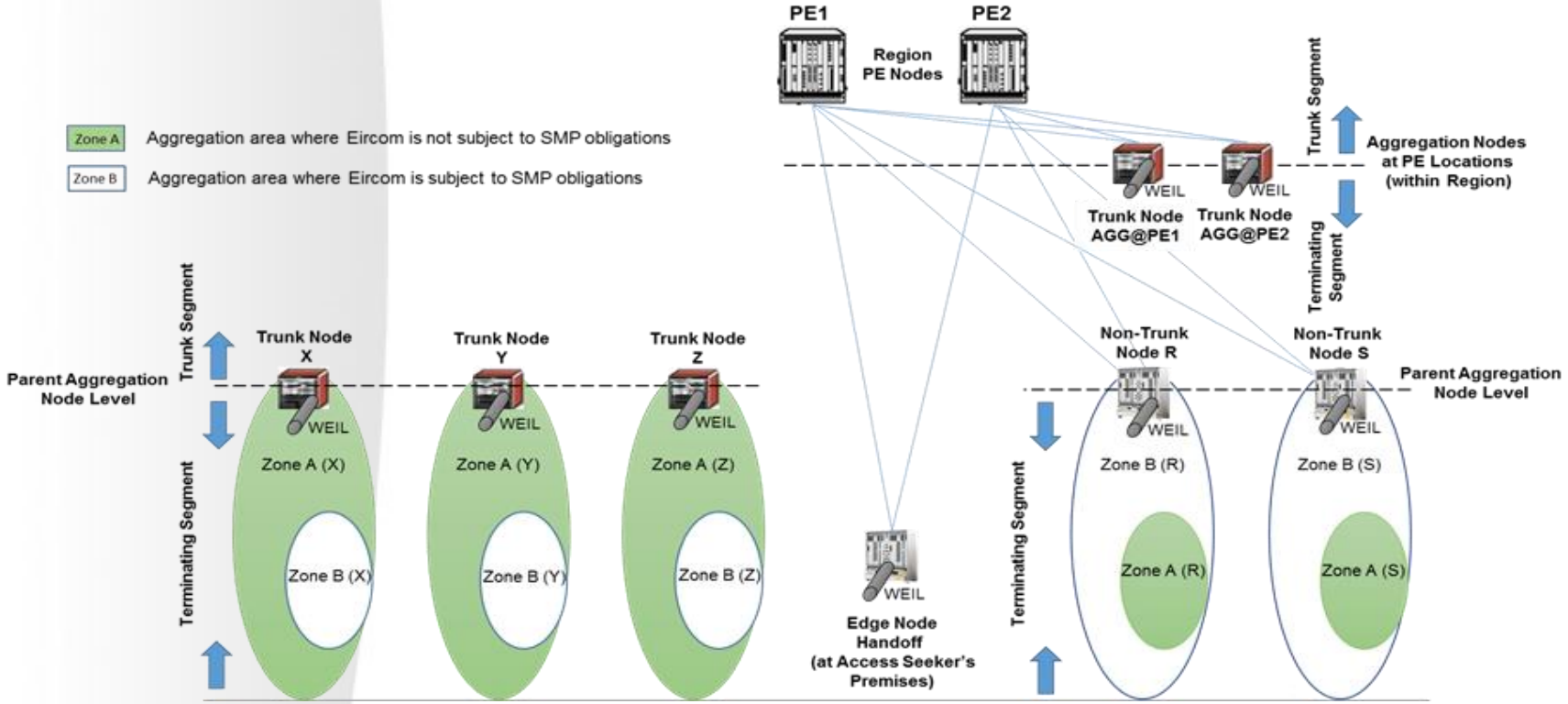
OR

(c). WEIL on Edge Node (i.e. ENH at Access Seeker's premises) within the Aggregation region.

MI WHQA Market Aggregation Region

Regulated MI WHQA NGN Ethernet Logical Service (Figure 24, Appendix 9)

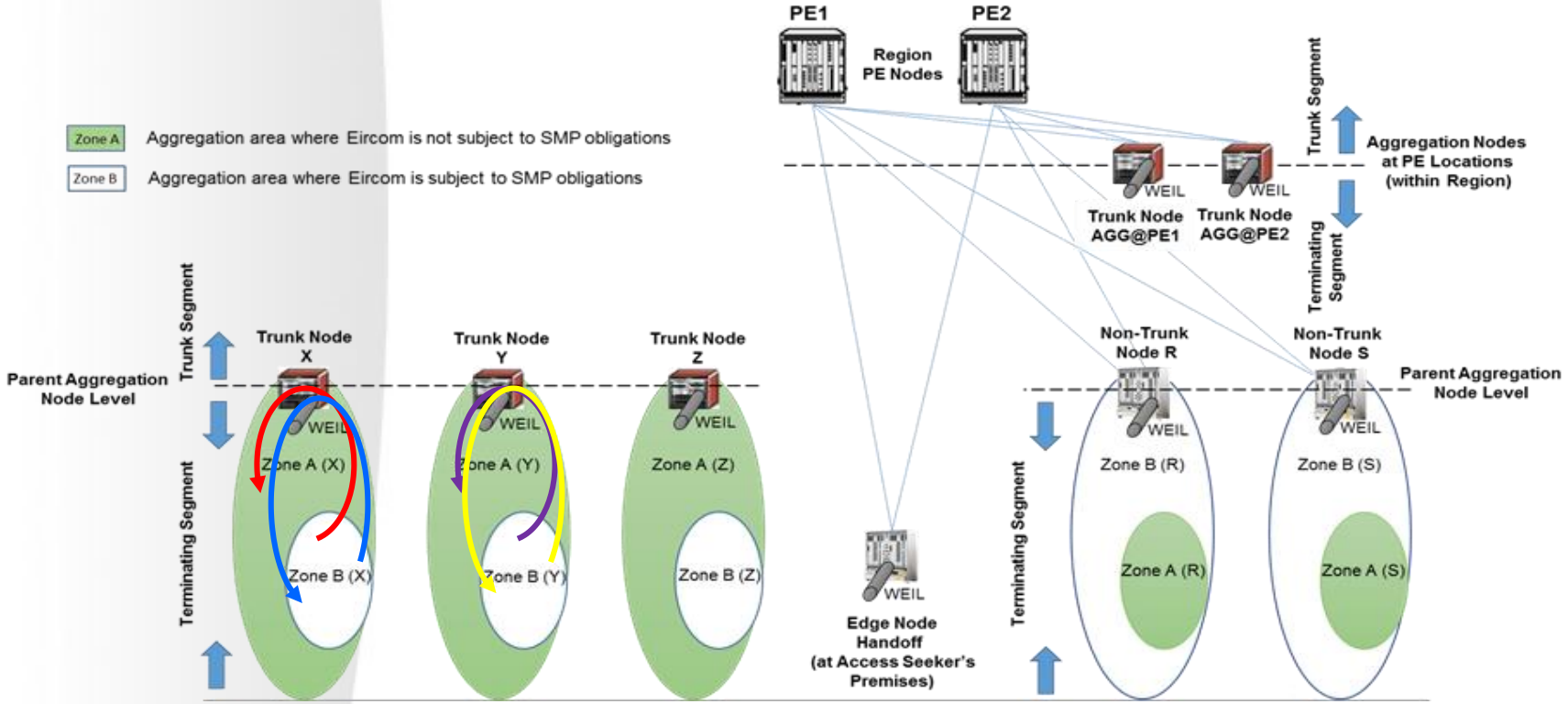
	Regulated NGN Ethernet Logical Service		Interconnection										
			Zone A (X) WEIL	Zone B (X) WEIL	Zone A (Y) WEIL	Zone B (Y) WEIL	Zone A (R) WEIL	Zone B (R) WEIL	Zone A (S) WEIL	Zone B (S) WEIL	AGG@PE1 WEIL	AGG@PE2 WEIL	ENH WEIL
Access	Zone A (X)	WSEA	No	No	No	No	No	No	No	No	No	No	No
	Zone B (X)	WSEA	Yes	Yes	No	No	No	No	No	No	No	No	No
	Zone A (Y)	WSEA	No	No	No	No	No	No	No	No	No	No	No
	Zone B (Y)	WSEA	No	No	Yes	Yes	No	No	No	No	No	No	No
	Zone A (R)	WSEA	No	No	No	No	No	No	No	No	No	No	No
	Zone B (R)	WSEA	No	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes
	Zone A (S)	WSEA	No	No	No	No	No	No	No	No	No	No	No
	Zone B (S)	WSEA	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes



MI WHQA Market Aggregation Region

Regulated MI WHQA NGN Ethernet Logical Service (Figure 24, Appendix 9)

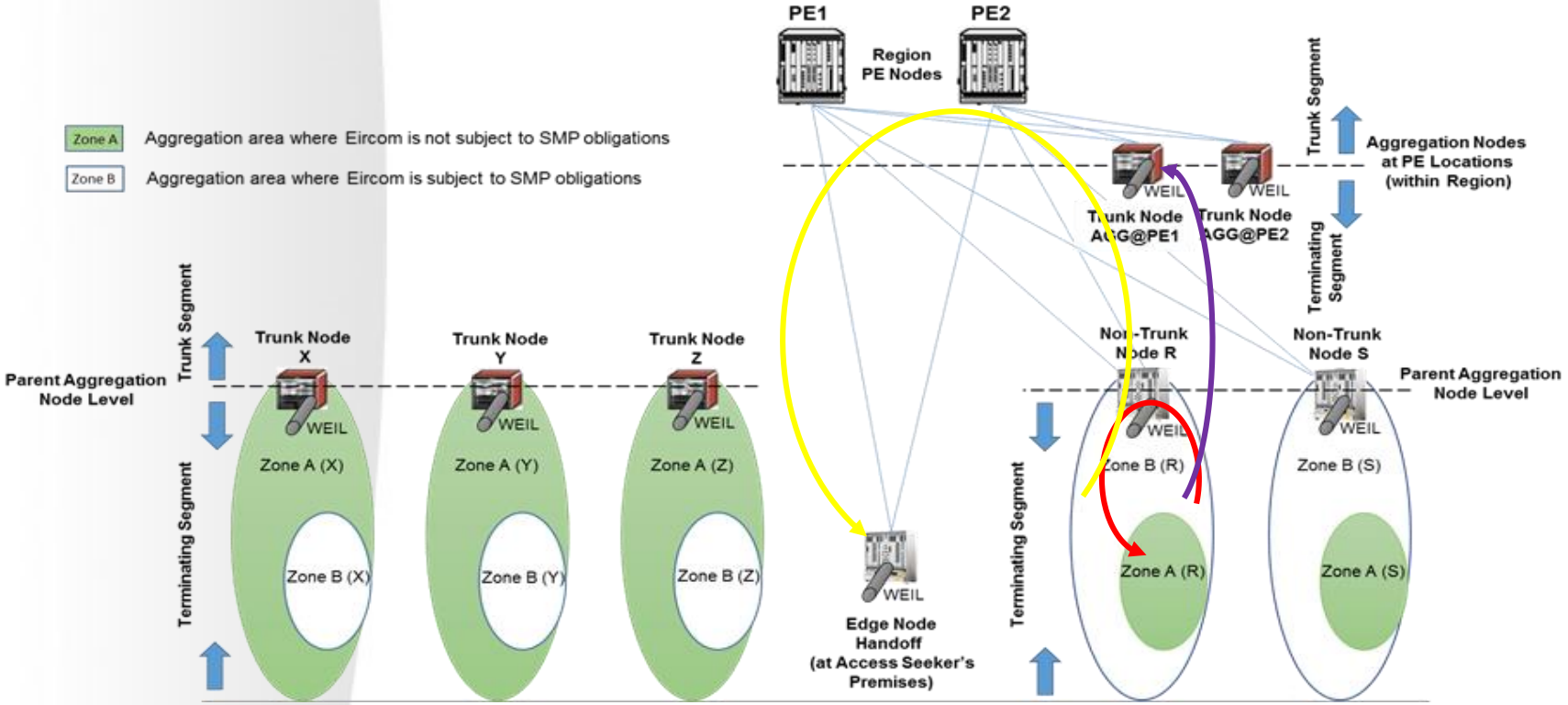
	Regulated NGN Ethernet Logical Service		Interconnection: Zone A (X) WEIL	Zone B (X) WEIL	Zone A (Y) WEIL	Zone B (Y) WEIL	Zone A (R) WEIL	Zone B (R) WEIL	Zone A (S) WEIL	Zone B (S) WEIL	AGG@PE1 WEIL	AGG@PE2 WEIL	ENH WEIL
Access	Zone A (X)	WSEA	No	No	No	No	No	No	No	No	No	No	No
	Zone B (X)	WSEA	Yes	Yes	No	No	No	No	No	No	No	No	No
	Zone A (Y)	WSEA	No	No	No	No	No	No	No	No	No	No	No
	Zone B (Y)	WSEA	No	No	Yes	Yes	No	No	No	No	No	No	No
	Zone A (R)	WSEA	No	No	No	No	No	No	No	No	No	No	No
	Zone B (R)	WSEA	No	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes
	Zone A (S)	WSEA	No	No	No	No	No	No	No	No	No	No	No
	Zone B (S)	WSEA	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes



MI WHQA Market Aggregation Region

Regulated MI WHQA NGN Ethernet Logical Service (Figure 24, Appendix 9)

	Regulated NGN Ethernet Logical Service		Interconnection: Zone A (X) WEIL	Zone B (X) WEIL	Zone A (Y) WEIL	Zone B (Y) WEIL	Zone A (R) WEIL	Zone B (R) WEIL	Zone A (S) WEIL	Zone B (S) WEIL	AGG@PE1 WEIL	AGG@PE2 WEIL	ENH WEIL
Access	Zone A (X)	WSEA	No	No	No	No	No	No	No	No	No	No	No
	Zone B (X)	WSEA	Yes	Yes	No	No	No	No	No	No	No	No	No
	Zone A (Y)	WSEA	No	No	No	No	No	No	No	No	No	No	No
	Zone B (Y)	WSEA	No	No	Yes	Yes	No	No	No	No	No	No	No
	Zone A (R)	WSEA	No	No	No	No	No	No	No	No	No	No	No
	Zone B (R)	WSEA	No	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes
	Zone A (S)	WSEA	No	No	No	No	No	No	No	No	No	No	No
	Zone B (S)	WSEA	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes



Pricing Perspective
Regulated MI WHQA NGN Ethernet Service

Physical Circuits

WEIL (NGN Ethernet Interconnection circuit) is always regulated in Zone A and Zone B.

WSEA Physical (NGN Ethernet Access circuit) is always regulated in Zone B.

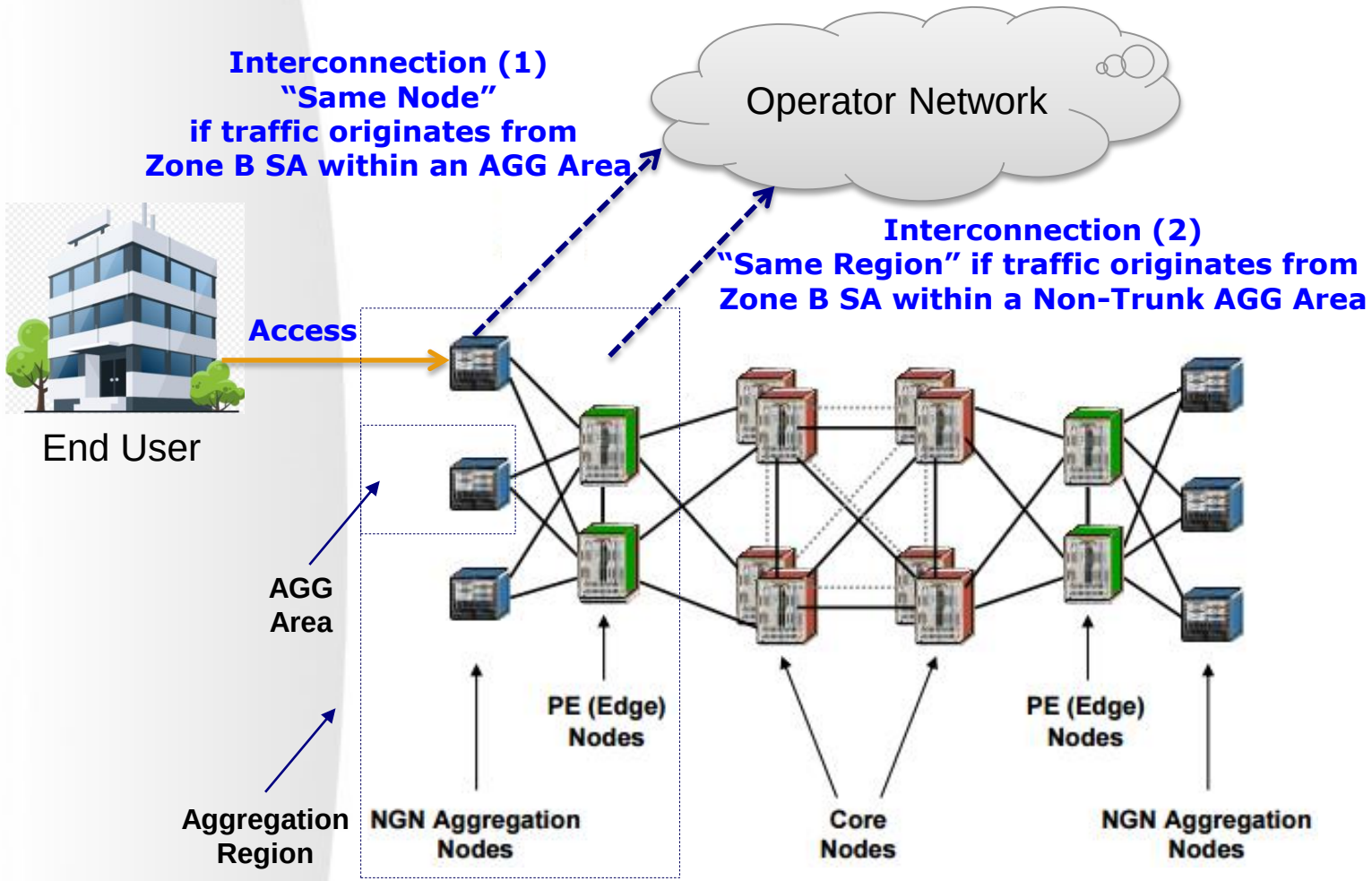
Logical Circuits (originating in Trunk Node area)

The regulated MI WHQA NGN Ethernet logical services available in the Trunk Node Aggregation area will be 'Same Node' pricing.

Logical Circuits (originating in Non-Trunk Node area)

The regulated NGN Ethernet logical services available in the Non-Trunk Node Aggregation area will be 'Same Node', 'Same Region' or 'ENH Same Region' as appropriate

Regulated MI WHQA NGN Ethernet Service - Summary



Appendix 9 – Correction

(Further Consultation: paragraph A 9.12 page 519)

A 9.12 Focusing on MI WHQA NGN Ethernet services required to be provided by Eircom in the Aggregation area associated with Non-Trunk Node R:

(a) A regulated MI WHQA NGN Ethernet logical service from Zone A (R) WSEA is not required to be provided by Eircom;

(b) An Access Seeker must have the ability to connect an access circuit in Zone B (where Eircom is subject to SMP obligations) to an Interconnection circuit. A MI WHQA NGN Ethernet logical service from Zone B (R) WSEA, is required to be provided by Eircom, and can terminate either on a WEIL at Non-Trunk Node R (Zone A or Zone B) if the Access Seeker is present in that Node or, if it is not present at the Non Trunk Node at either of the two Trunk Nodes located at the PE exchanges (AGG@PE1, AGG@PE2) i.e. at the associated Aggregation Nodes;

(c) A MI WHQA NGN Ethernet logical service, required to be provided by Eircom, from ~~Zone B (X)~~ WSEA can terminate on an Edge Node (i.e. ENH at Access Seeker's premises) within the Aggregation region.

Zone B (R)

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MI WHQA Market Aggregation Region
Regulated MI WHQA WDM Service

Rules that are applicable for

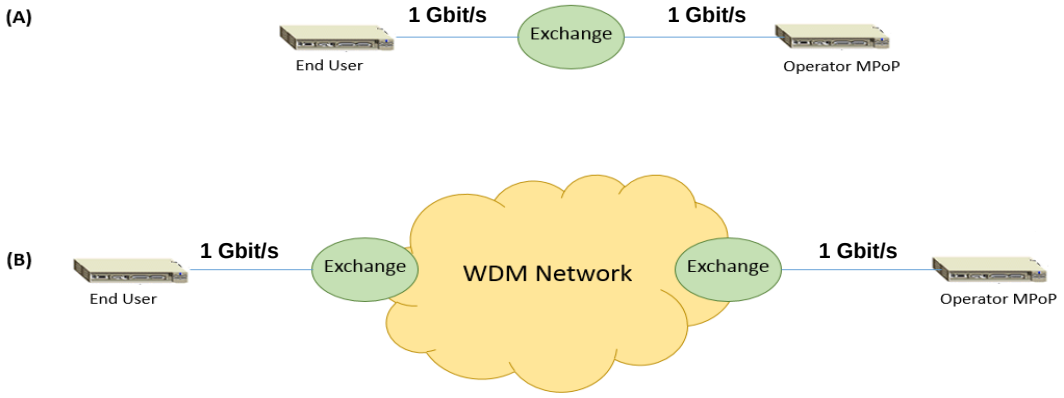
Regulated MI WHQA NGN Ethernet Services

are also applicable for

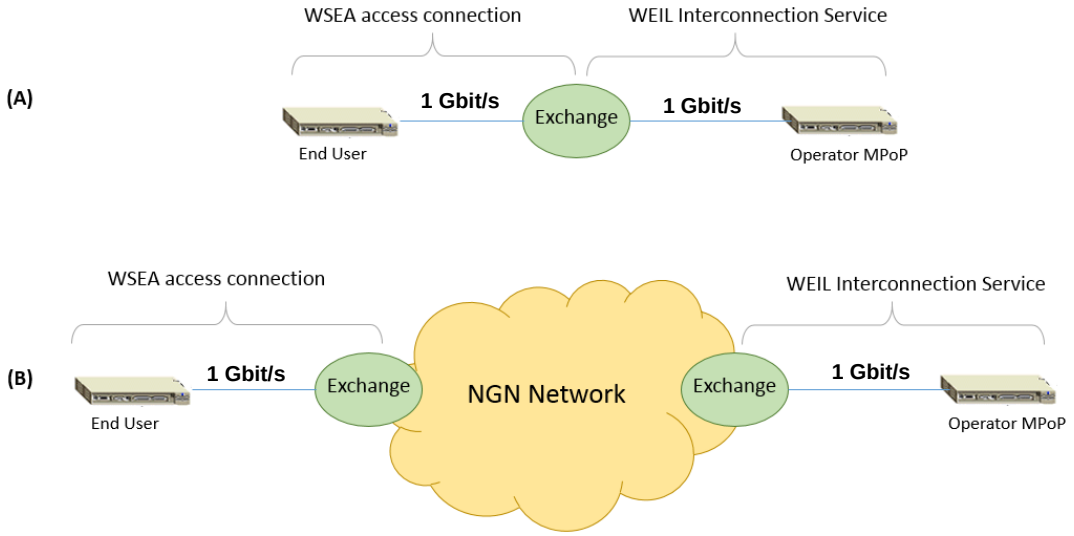
Regulated MI WHQA WDM Services

MI WHQA WDM versus MI WHQA NGN Ethernet service

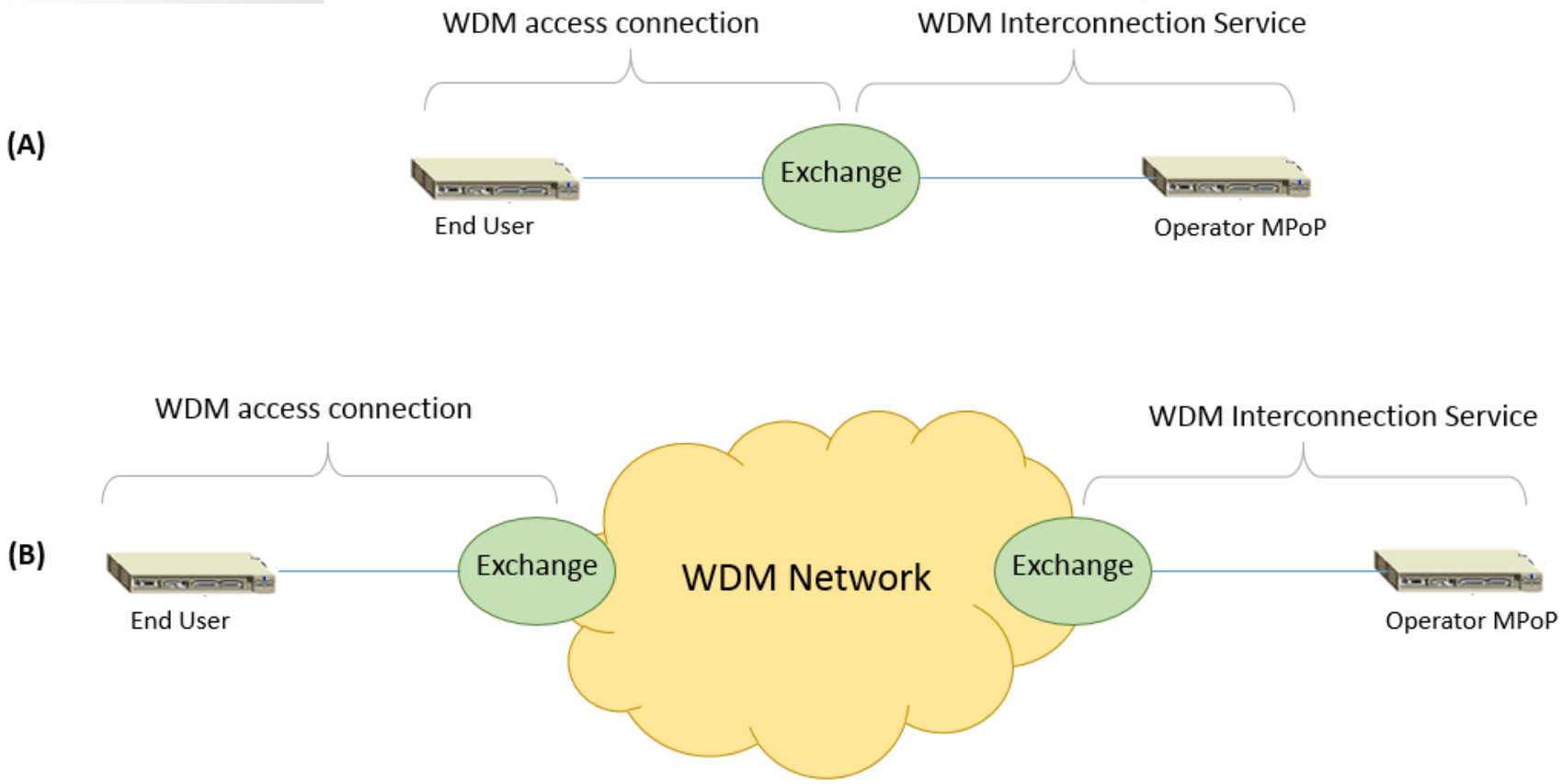
MI WHQA WDM



MI WHQA NGN Ethernet

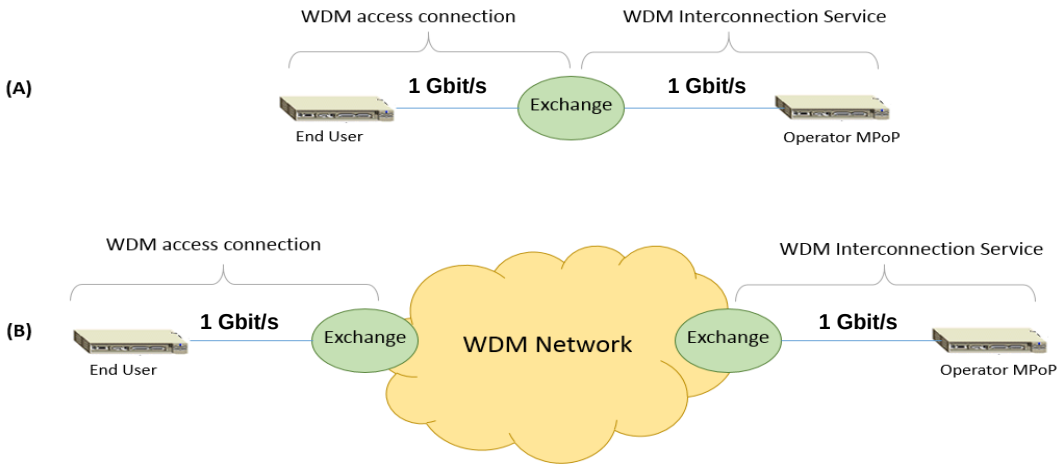


MI WHQA WDM service (1)

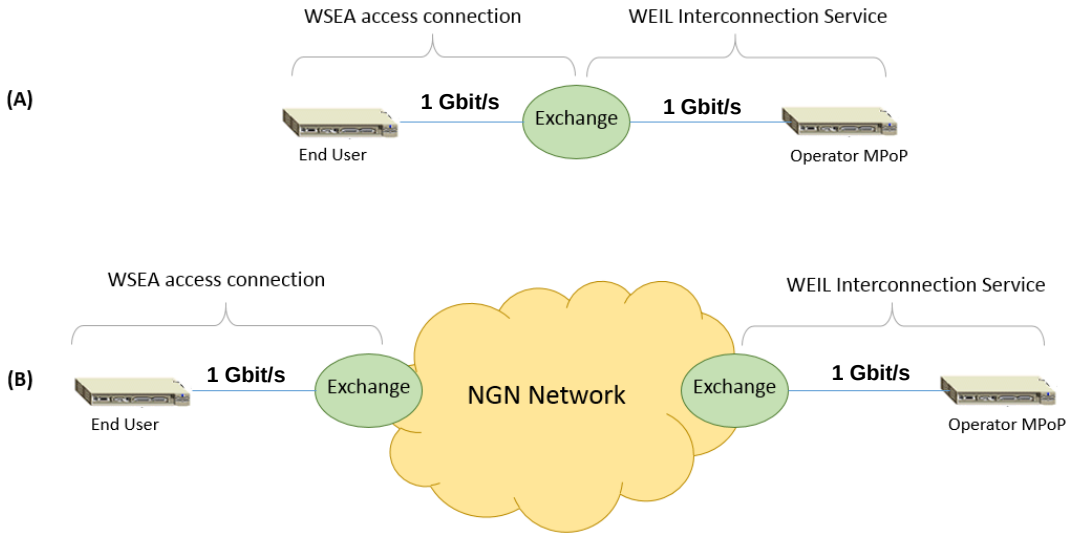


MI WHQA WDM versus MI WHQA NGN Ethernet service

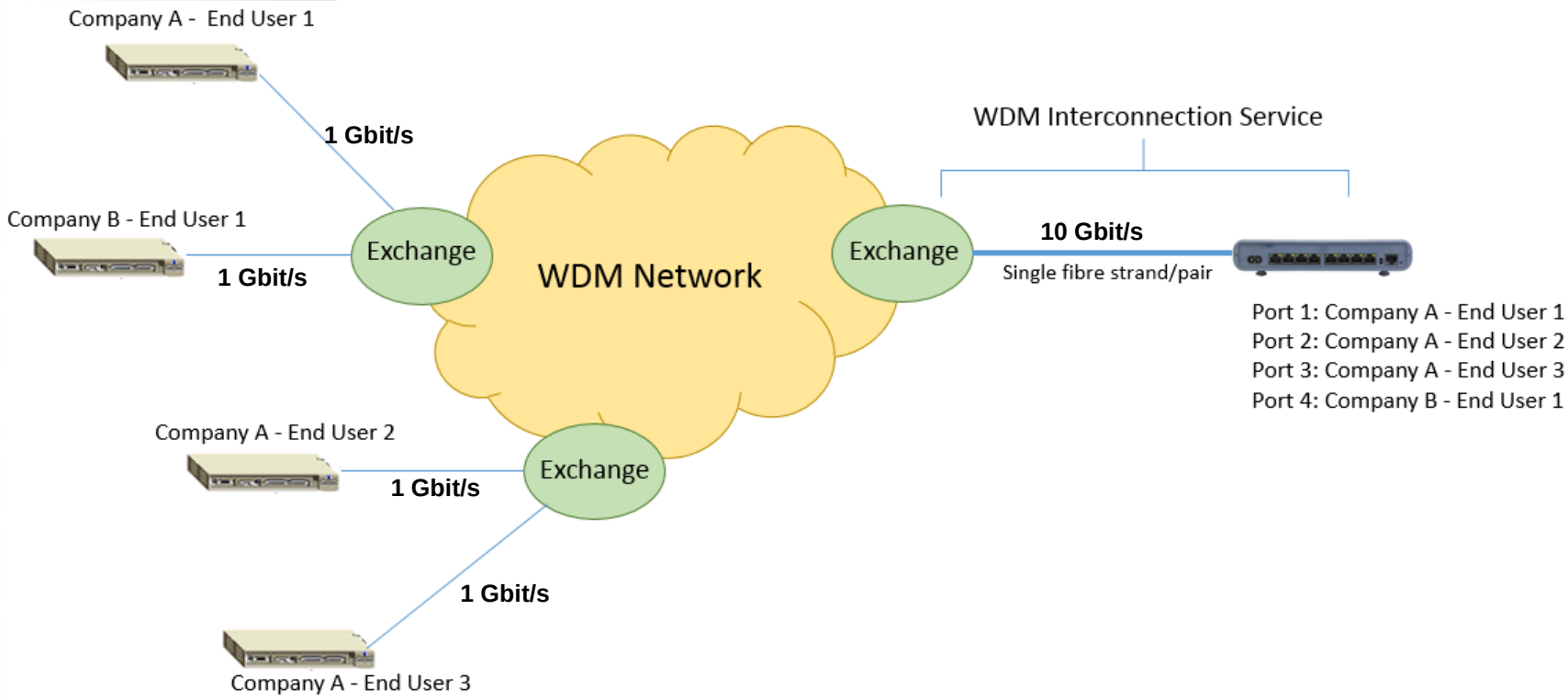
MI WHQA WDM



MI WHQA NGN Ethernet

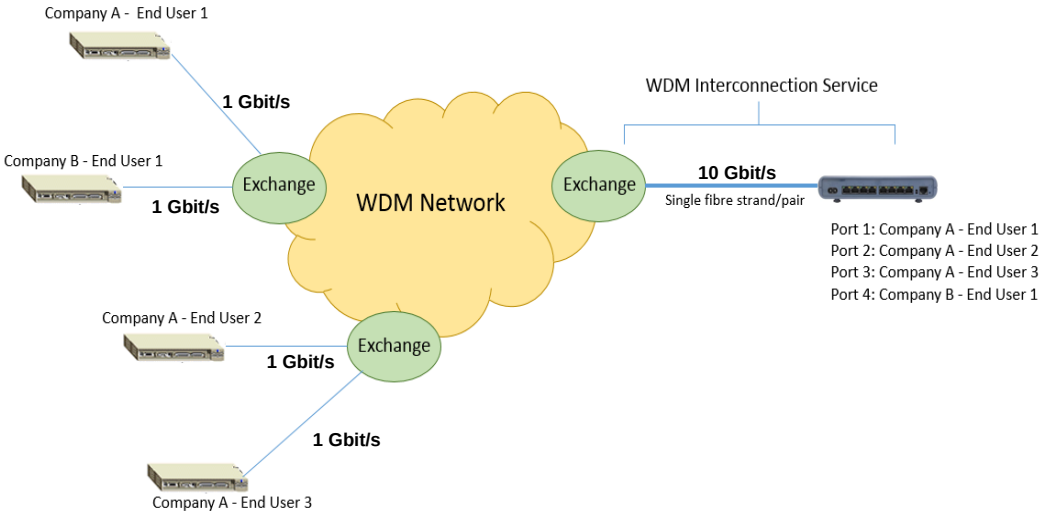


MI WHQA WDM service (2)

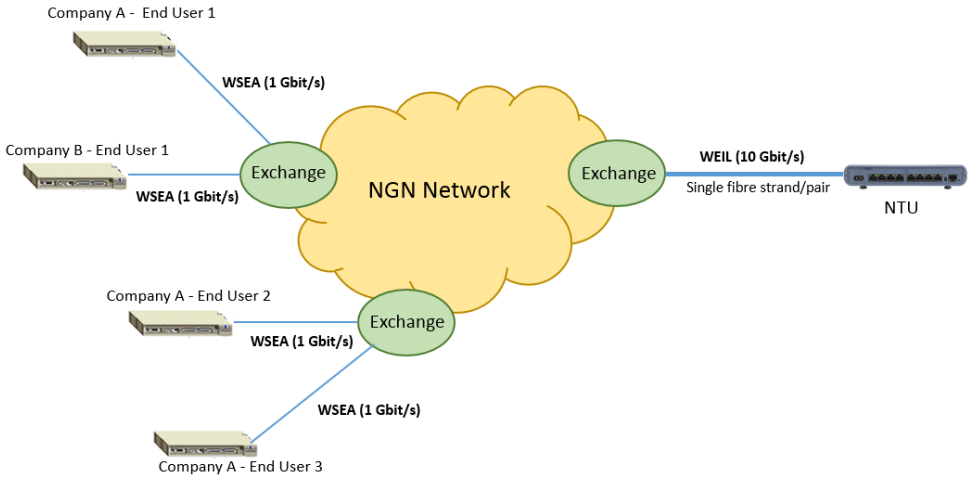


MI WHQA WDM versus MI WHQA NGN Ethernet

MI WHQA WDM



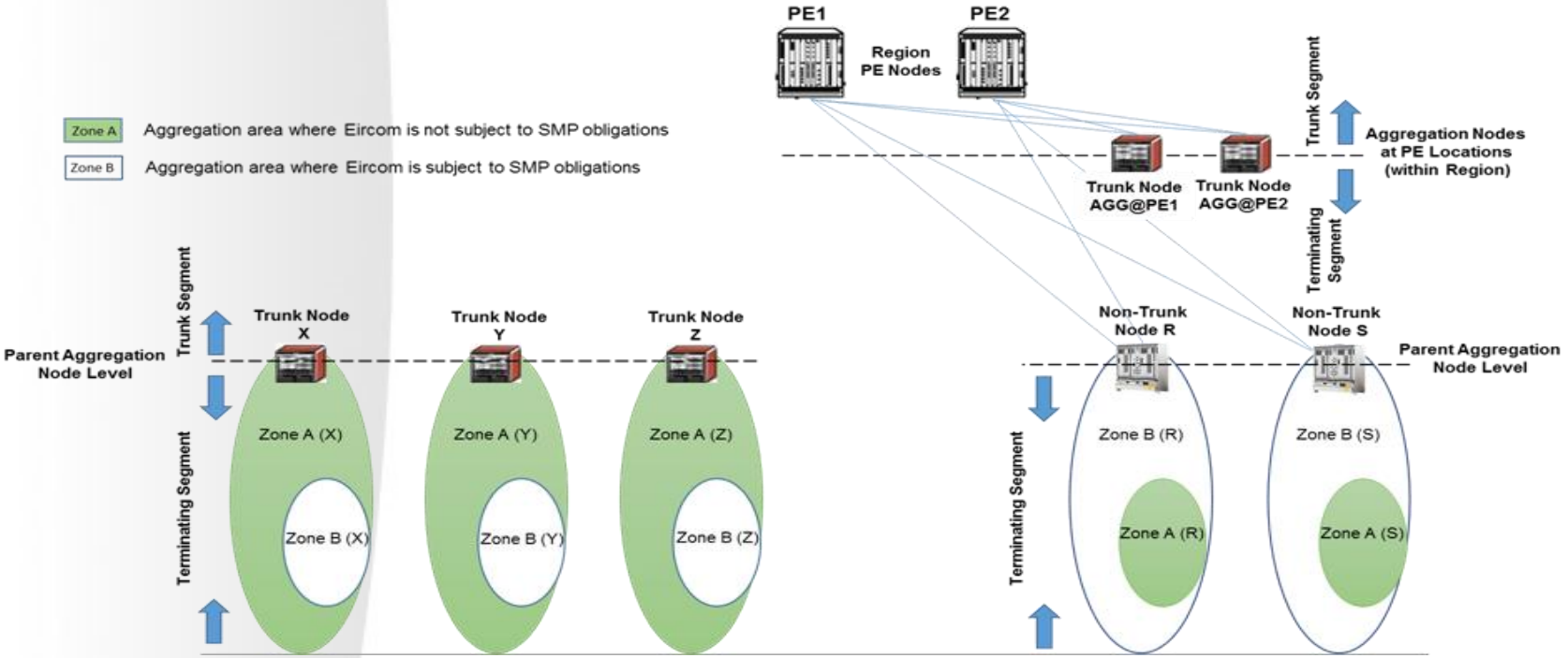
MI WHQA NGN Ethernet



MI WHQA Market Aggregation Region

Regulated MI WHQA WDM Service (Figure 25, Appendix 9)

	Regulated WDM Service	WUP Interconnect: Zone A (X)	Zone A (Y)	Zone A (R)	Zone A (S)	PE1 Exchange	PE2 Exchange
Access	Zone A (X) WUP end	No	No	No	No	No	No
	Zone B (X) WUP end	Yes	No	No	No	No	No
	Zone A (Y) WUP end	No	No	No	No	No	No
	Zone B (Y) WUP end	No	Yes	No	No	No	No
	Zone A (R) WUP end	No	No	No	No	No	No
	Zone B (R) WUP end	No	No	Yes	No	Yes	Yes
	Zone A (S) WUP end	No	No	No	No	No	No
	Zone B (S) WUP end	No	No	No	Yes	Yes	Yes



MI WHQA Market Aggregation Region
Regulated MI WHQA WDM Service

MI WHQA WDM Service in Trunk Node area

WDM Interconnect (IBH, CSH) in Zone A or B

and

WDM Access (IBH, CSH) in Zone B of the same Trunk Node area.

MI WHQA WDM Service in Non-Trunk Node area

WDM Interconnect (IBH, CSH) in Zone A or B

and

WDM Access (IBH, CSH) in Zone B **of the same** Non-Trunk Node area.

Or

WDM Interconnect (IBH, CSH) is in Zone A or B areas of the two Trunk Nodes located at the PE exchanges

and

WDM Access (IBH, CSH) in Zone B of the Non-Trunk Node area.

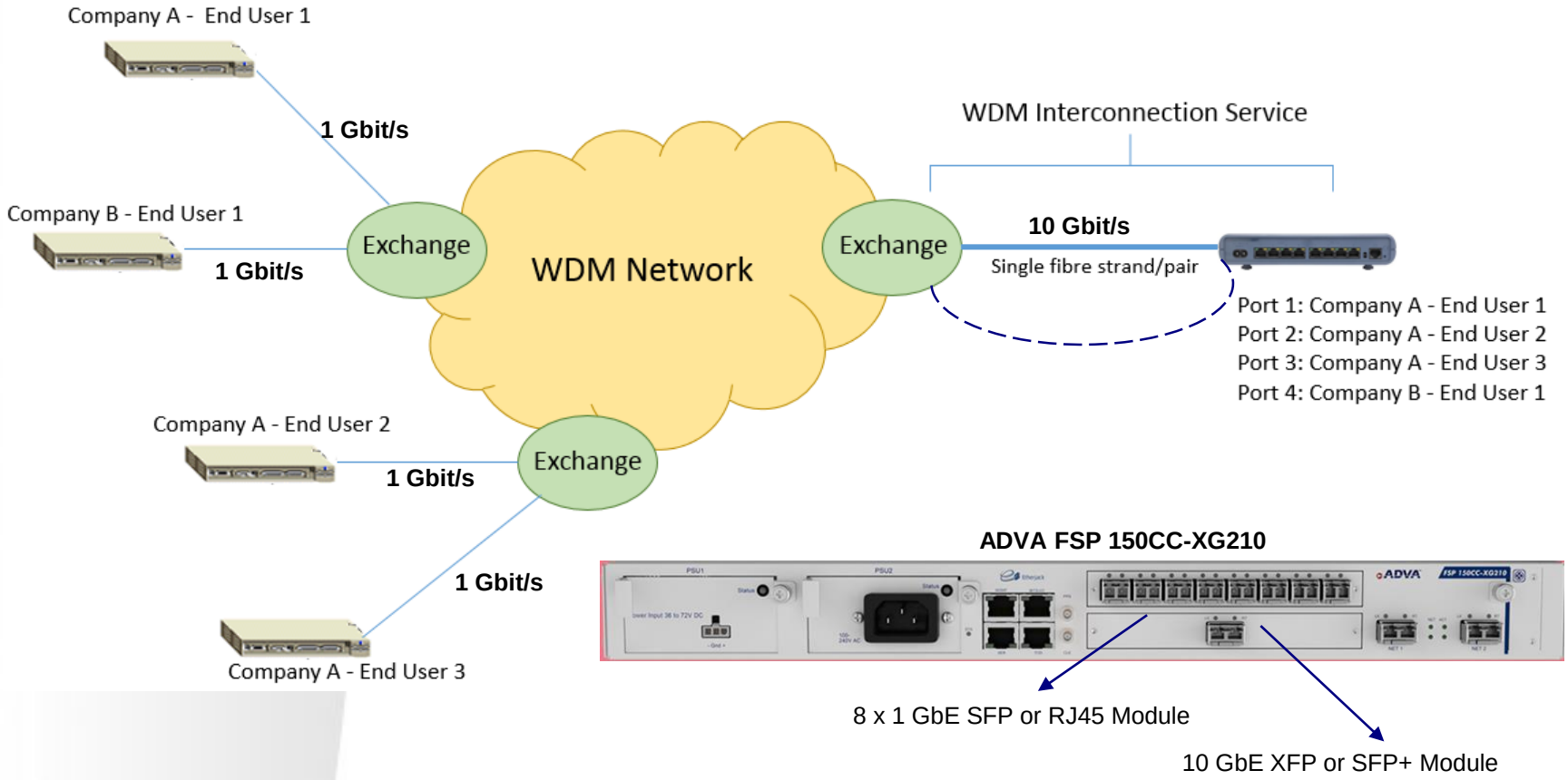
WHQA Market - NGN Ethernet Aggregation Regions

Region Number	Eircom Region Reference	PE Node 1 Location	PE Node 2 Location
1	Urban A	Beggers Bush (BBH)	Priory Park (PRP)
2	Urban B	Blanchardstown (BDT)	Fingalas (FNG)
3	Urban C	Belcamp (BLP)	Summerhill (SRL)
4	Urban D	Nangor Road, Clondalkin (CLD)	Dolphins Barn (DBN)
5	Urban E	Churchfield (CHF)	Quaker Road (QKR)
	Provincial J	Churchfield (CHF)	Quaker Road (QKR)
6	Urban F	Limerick (LMK)	Mallow (MLW)
	Provincial K	Limerick (LMK)	Mallow (MLW)
7	Provincial N	Limerick (LMK)	Portlaoise (PGS)
8	Urban G	Mervue (MVW)	Shantalla (SLA)
9	Urban H	Priory Park (PRP)	Waterford (WTD)
	Provincial O	Priory Park (PRP)	Waterford (WTD)
	Provincial P	Priory Park (PRP)	Waterford (WTD)
10	Provincial I	Bridgend (BGE)	Rathedmond, Sligo (RTD)
11	Provincial L	Drogheda (DBC)	Mullingar (MGR)
12	Provincial Z	Roslevin, Athlone (RSL)	Rathedmond, Sligo (RTD)

Question 1: Technical characteristics of a WDM Interconnect

ComReg does not specify technical specifications.

The following example is strictly for illustration purposes only



Question 2 (a):

Why is there a Zone A(X) and Zone B(X) WEIL in Figure 24 in Annex 9.

For example, “Regulated NGN Ethernet Logical Service” - Access Zone B (X) – WSEA has “Yes” inserted under both “Interconnection” Zone A (X) WEIL and Zone B (X) WEIL.

Response:

Regulated Interconnection and Co-Location services are available throughout the MI WHQA market (i.e. Zone A and Zone B).

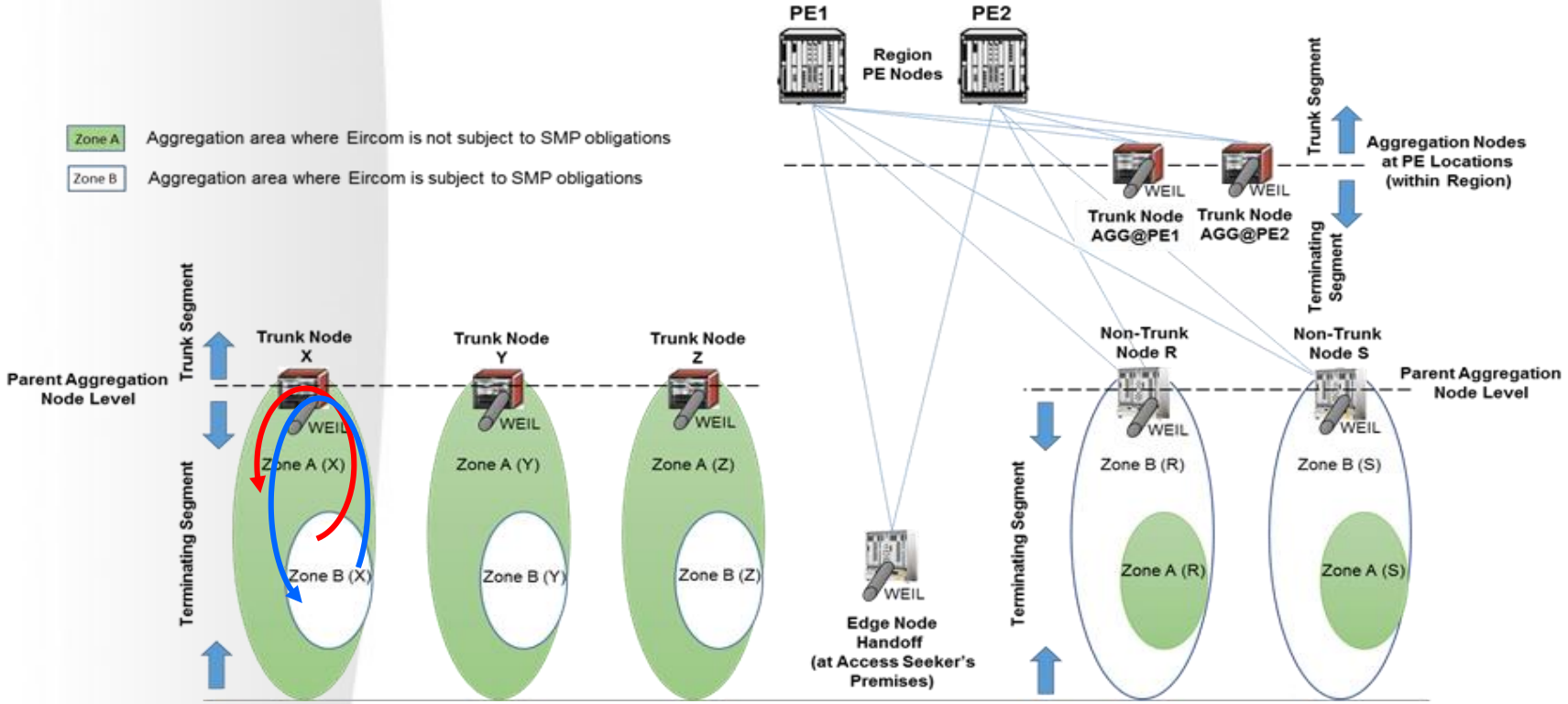
All physical NGN Ethernet WSEA services in Zone B are regulated.

A NGN Ethernet Logical service from Zone B is regulated in certain circumstances (refer to Figure 24 in Annex 9)

MI WHQA Market Aggregation Region

Regulated MI WHQA NGN Ethernet Logical Service (Figure 24, Appendix 9)

	Regulated NGN Ethernet Logical Service		Interconnection										
			Zone A (X) WEIL	Zone B (X) WEIL	Zone A (Y) WEIL	Zone B (Y) WEIL	Zone A (R) WEIL	Zone B (R) WEIL	Zone A (S) WEIL	Zone B (S) WEIL	AGG@PE1 WEIL	AGG@PE2 WEIL	ENH WEIL
Access	Zone A (X)	WSEA	No	No	No	No	No	No	No	No	No	No	No
	Zone B (X)	WSEA	Yes	Yes	No	No	No	No	No	No	No	No	No
	Zone A (Y)	WSEA	No	No	No	No	No	No	No	No	No	No	No
	Zone B (Y)	WSEA	No	No	Yes	Yes	No	No	No	No	No	No	No
	Zone A (R)	WSEA	No	No	No	No	No	No	No	No	No	No	No
	Zone B (R)	WSEA	No	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes
	Zone A (S)	WSEA	No	No	No	No	No	No	No	No	No	No	No
	Zone B (S)	WSEA	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes



Question 2(b):

Does this imply that if eir chooses to provide a WSEA in Zone A that it must be terminated on a separate WEIL to that for Zone B WSEAs?

Response:

No.

If Eircom wishes to provide an unregulated WSEA in Zone A, then by default the NGN Ethernet Logical circuit is unregulated.

The unregulated NGN Ethernet Logical circuit can terminate on any operator's WEIL, assuming that Eircom agrees to provide the unregulated NGN Ethernet Logical circuit.

Question 3:

Where a WHQA B-end terminates in a Zone B Small Area ('SA') but needs to traverse a Zone A SA to reach the Eircom AGG node, has Eircom an obligation to provide that proportion of the WHQA access circuits that traverses the Zone A ?

Response:

Yes, assuming the eir AGG node is that appropriate AGG node in order to classify the circuit as regulated.

Circuits traversing a particular Zone have no bearing on whether the circuit is regulated or not.

The criteria which determines whether a circuit is regulated is determined by the start and end points of the circuits.

Question 4:

Can ComReg confirm it is moving away from end-to-end leased line concept across Eircom network?

For example, Enterprise Customer A branches in Cork and Dublin connected by 10 Mb/s “leased line”. Both are in Zone B’s connected to a Trunk Node. Presumably Eircom also no longer obliged to connect between trunk nodes. However, if both were in Cork off same Trunk Node Eircom would be obliged to connect assuming both B-ends reside in Zone B SAs ? Presumably both ends of access circuit would traverse the same WEIL.

Response:

The 10Mbits circuit between Cork (Zone B) and Dublin (Zone B) is unregulated given that the circuit is inter region [e.g. Region 5 (Cork) to Region 1 (Dublin); see table 27 Appendix 9].

Assuming that both End User sites were (a) in Zones B in Cork and (b) shared the same Trunk Node (e.g. Quaker Road AGG node), then the Access Seeker has the following options:

(a) Install a WEIL at one customer site and a WSEA at the other. Connect both sites with a 10Mbit/s logical (WES);

or

(b) Install a WSEA at both customer sites. Connect both sites with two 10Mbit/s logical circuits(WES) utilising an WEIL service from the appropriate Trunk Node (i.e. Quaker Road AGG node)

Question 5:

(a) Is there any restriction in the use of Co-location – for example can NGA and WSEAs and LLU services be connected into one Co-location rack for backhaul ?

(b) How can operator owned/built multi-fibre access cables originating in Zone A SAs be terminated on Operator ODF/colocation on exchange floor? Does this form part of the proposed CEI remedies in WLA/WCA Market Review ?

(c) If so how as current duct access product does not seem to address bringing fibres onto the exchange floor? What restrictions (if any) are there bringing dark fibre onto the exchange floor ?

Response:

(a) There is no restriction in the use of Co-location – for example NGA, WSEAs and LLU services be connected into one Co-location rack.

(b) An operator owned/built multi-fibre access cables originating in Zone A SAs can be terminated on the Operator ODF/colocation on the exchange floor using CEI Access (as proposed in the recent WLA/WCA Market Review).

(c) As outlined in the recent WLA/WCA Market Review, there is no restrictions in bringing the Operators dark fibre onto the exchange floor to an Operators Co-Location rack.

Question 6:

Will an operator have to buy backhaul when handing over from the same node?

Response:

'Same Node' handoff at a Trunk/Non Trunk Nodes does not require backhaul.

If the node is a Trunk Node, and the operator wishes to transport traffic to/from the Trunk Node, then the operator can

(a) Purchase backhaul commercially at the Trunk Node, or

(b) Enter into an Interconnection Sharing arrangement with another operator who has backhaul at the Trunk Node, or

(c) Install their own backhaul at the Trunk Node.

If the node is a Non Trunk Node, and the operator wishes to transport traffic to/from Region, then the operator can

a) Purchase backhaul commercially (at Non-Trunk Node or Trunk Nodes at PE exchanges), or

b) Enter into an Interconnection Sharing arrangement with another operator who has backhaul (at the Non-Trunk Node or Trunk Nodes at PE exchanges), or

c) Install their own backhaul (at the Non-Trunk Node or Trunk Nodes at PE exchanges).