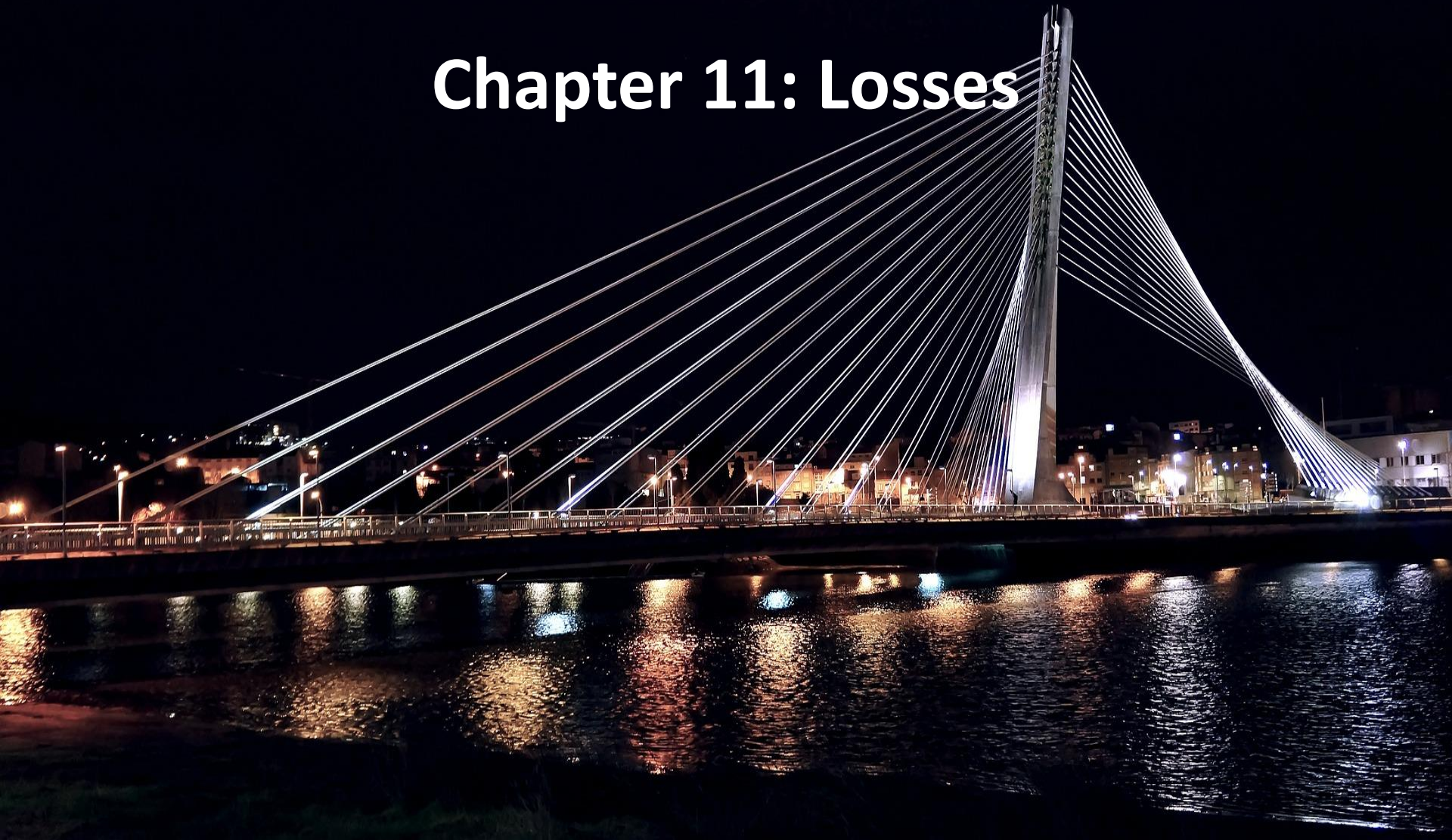


# Chapter 11: Losses



# Losses

- Generators are not attributed the power they generate which does not get to end consumers, i.e. which have been lost on the transmission and distribution systems;
- This is removed by estimating the relationship between the location of a particular generator and the losses resulting when trying to transport power to end consumers suppliers (e.g. if a unit has a lot of the system to get through to get to end consumers then their loss factor may be higher). This estimate is through Transmission and Distribution Loss Adjustment Factors, which are multiplied together to form Combined Loss Adjustment Factors;
- Applying these loss factors to all generators means they can be compared on a like-with-like basis at the same notional point on the system rather than the actual distributed physical points on the system with their different losses. The notional point is known as the “Trading Boundary”, and the actual physical point where the unit is located is known as the “Station Gate”;
- Any variable in the code which has an “LF” at the end prior to the subscripts means that the value of the variable is multiplied by the relevant loss-factor;
- Ex-ante market trades must be at the “Trading Boundary” when the unit submits them, i.e. they need to have loss factors incorporated into their quantities and prices.

# Losses

- Physical system operation is seen at the Station Gate, and it is at this point that dispatch instructions will be issued:
  - Physical Notification Quantities need to be at the “Station Gate” also, i.e. not adjusted for losses, to reflect the fact that Dispatch Instructions from the SOs to follow this output level or a level above/below it will be issued for MW output levels at the “Station Gate”.
- However in order to settle correctly, and in order to compare like-with-like against the ex-ante market quantities, the balancing market quantities need to move from the “Station Gate” to the “Trading Boundary”:
  - Metered quantities are loss-adjusted (QMLF) for comparison with net ex-ante market trades (QEX, already implicitly loss adjusted from the trade quantity inputs);
  - BOAs will initially be calculated minute-by-minute at the “Station Gate”, before being converted to an integrated Imbalance Settlement Period quantity, and then to a quantity at the “Trading Boundary” by multiplying it by a loss factor prior to its being used in settlement;
  - Since the quantities are being adjusted for losses, to get the same revenue for an action Participants will need to incorporate loss factors into their Bid Offer Prices.
- Loss factors for interconnectors are intended to be the same across all market timeframes, therefore the basis of their calculation is different under I-SEM – a single value reflecting the losses on the line as it is represented in the ex-ante markets, rather than the impact of the line on the losses of the system.