Swiss Re
Corporate Solutions

Hedging Temperature and Gas Prices

Exposure and application

Gas retailers face both temperature and commodity price risk: temperature drives demand and gas prices drive margins

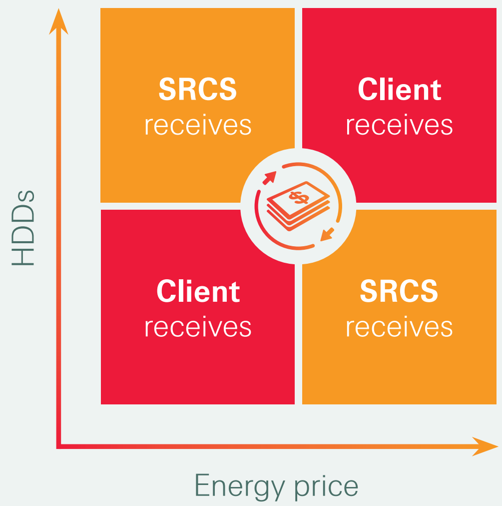
Since temperature is unpredictable, risk managers must guess when they put price hedging in place – most hedge to a normal level of demand

Even modest fluctuations around those "normal" volumes play havoc with gas price hedges

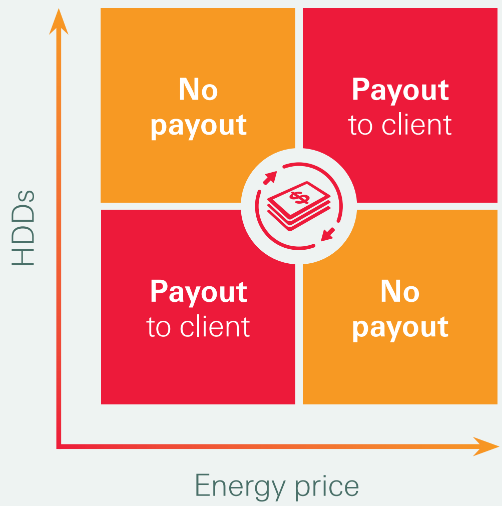
Financial index products compete very effectively with other ways to manage this risk (active delta hedging, storage, flex in gas contracts)

Structure

Swap payout mechanics



Option payout mechanics



Notional terms

Product:	Temperature / gas swap
Location:	London Heathrow Airport (LHR)
Index:	Heating Degree Days (HDDs): Difference between a day's average temperature and 18, if negative. Examples: If average temperature is superior or equal to 18° C, then HDD count for that day is 0. If average temperature is 11, then HDD count for that day is 7. Gas index (Price) = NBP day-ahead price
Strike:	Set by client according to hedging strategy
Payout:	Daily Payout = (HDDActual – HDDStrike) x (PriceActual – PriceStrike) x Notional Volume
Tick or notional:	Can be fixed or shaped by gas demand
Term:	November to March

Case study

Client:	**UK household gas retail cooperative**
Problem:	Delta hedging strategy was not effective in smoothing margins, and carried high transaction costs
Solution:	Gas/temperature swap to offset variability in underlying operating profits
Location:	12 locations weighted to match load and service area
Result:	Operating profits were protected, giving business unit much more earnings stability

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