

CaseStudies

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1 stochastic formulas

stochastic total costs

$$\begin{aligned} totalCosts = & \left(\sum_{scenarios, t, plants, countries} scenarioProbability \right. \\ & * powerGenerationCosts_{scenario, t, country}(plant)) \\ & + investmentCosts \end{aligned}$$

stochastic demand

$$\begin{aligned} totalPowerGeneration = & powerDemand(country) * scenarioFactor \\ & + export \\ & + storageloading \\ = & totalPowerGeneration \end{aligned}$$

stage 2 implementation

$$\begin{aligned} powerGeneration(plant, country) \leq & (plantsCapacities(plant, country) \\ & + buildCapacities(plant, country) \\ & + StageOneInvestmentsDecision(plant, country)) \\ & * PlantsAvailability(plant) \end{aligned}$$