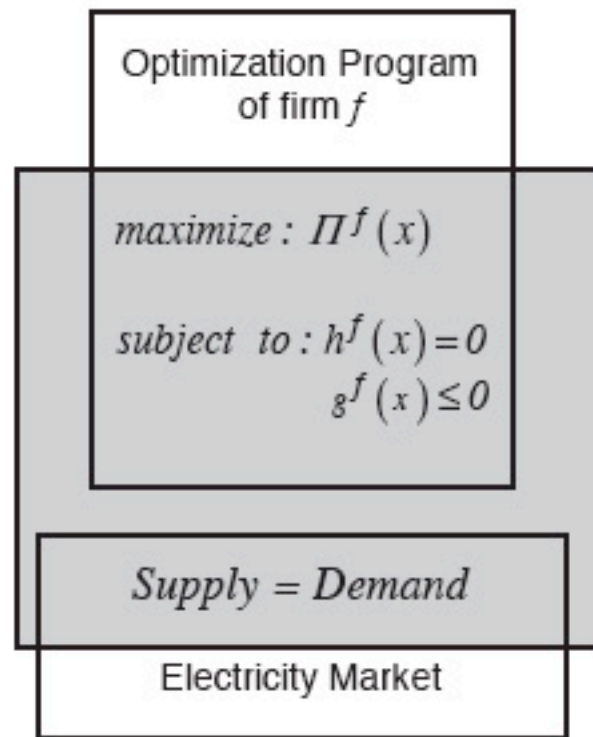## Single-firm Optimization Model

Equilibrium Model

Single-firm Optimization Model

Optimization Program of firm f

$maximize : \Pi^f(x)$

$subject\ to : h^f(x) = 0$
$\qquad\qquad g^f(x) \leq 0$

$Supply = Demand$

Electricity Market

Equilibrium Model

Optimization Program of Firm 1

$maximize : \Pi^1(x^1)$

$subject\ to : h^1(x^1) = 0$
$\qquad\qquad g^1(x^1) \leq 0$

$\cdots$

Optimization Program of Firm f

$maximize : \Pi^f(x^f)$

$subject\ to : h^f(x^f) = 0$
$\qquad\qquad g^f(x^f) \leq 0$

$\cdots$

Optimization Program of Firm F

$maximize : \Pi^F(x^F)$

$subject\ to : h^F(x^F) = 0$
$\qquad\qquad g^F(x^F) \leq 0$

$Supply = Demand$

Electricity Market