va u s can b us d as pr c s' p c ca y t y propos a n na pay nts or ac o t co od t s trad d and a supp nta pay nt assoc at d w t ac nt na cat v ty In an ctr c ty ar t t is t part o t r proposa s to a pay nts or n r s and r s rv s bas d on t dua var ab s assoc at d w t t syst n r s and r s rv ba anc constraints s conditional tas d scribbar natory pay nts to ac nator bas d on t dua var ab assoc at d w t t constraints is no t t d c s ons to t r opt a vau s' (N - t a) not t at t pr c s on t s co t nt act v t s ay b n s at v or nstance to ne nt a nator or a no n t s subopt a to co t t I In suce a cas

Ind d t s strator to s ow t at n a or s not prode ctricty ar twt N For rators v ry for rator r c v s xacty z ront protund r T/ os t s w d n t or for rator v rs on o t aufor nt d L as

w r  $K_i$  s  $\stackrel{P}{\longrightarrow}$  n rator i s capac ty and D st d and  $\stackrel{>}{>}$  dua o t s L s

$$\begin{array}{ll} \underset{\lambda, \lambda}{\operatorname{ax}} & \mathsf{D} \cdot & \sum_{i} \mathsf{u}_{i}^{*} \cdot \mathsf{\mu}_{i} \\ \mathrm{s}|\mathsf{t}| & i \leq \mathsf{c}_{i} & & \forall \mathsf{i} \quad , \dots, \mathsf{N} \\ & -\mathsf{K}_{i} \cdot & i \quad \mathsf{\mu}_{i} \end{array}$$

op rat  $n^{\circ}$  w c nat s ts n ra ar na r nts w r ast a w o prov s on do s not/ s na cas and our xa p su st st at **T** ay av portant p cat ons or on r a r capac ty xpans on/ s s b caus r structur d ctr c ty ar ts ay r y on spot ar t pr c s and assoc at d n ra ar na r nts to s na t n d or capac ty to b add d to t syst / Ind d on can xp c t y od oad curta nt as a n rat on t c no by wt z ro startup cost and var ab cost qua to a vau o ost oad as an xa p Kar u and A an st at a vau o ost oad o b tw n M M and M M / r su t n pr c o n r w n n rat on capac ty s x aust d and oad s curta d s nt nd d to prov d a stron s n capac ty nv st nt/ r ur xa p d onstrat s