CALIBRATION FACTOR CALCULATION
FLOW CHART

DATA INPUT
$POS_{ij}(k)$, $POD_{ij}(k)$, $PP_j(k)$, $FW(k)$, $ERR(k)$ LF_i, $CF(k-1)$,k,Y

ACTUAL

FORECAST

$A(k)$, $B(k)$, $FW(k)$

$C(k)$

$CF(k)=(B(k) - (A(k)+FW(k)+ERR(k)))/C(k)$

DATA OUTPUT
$CF(k)$
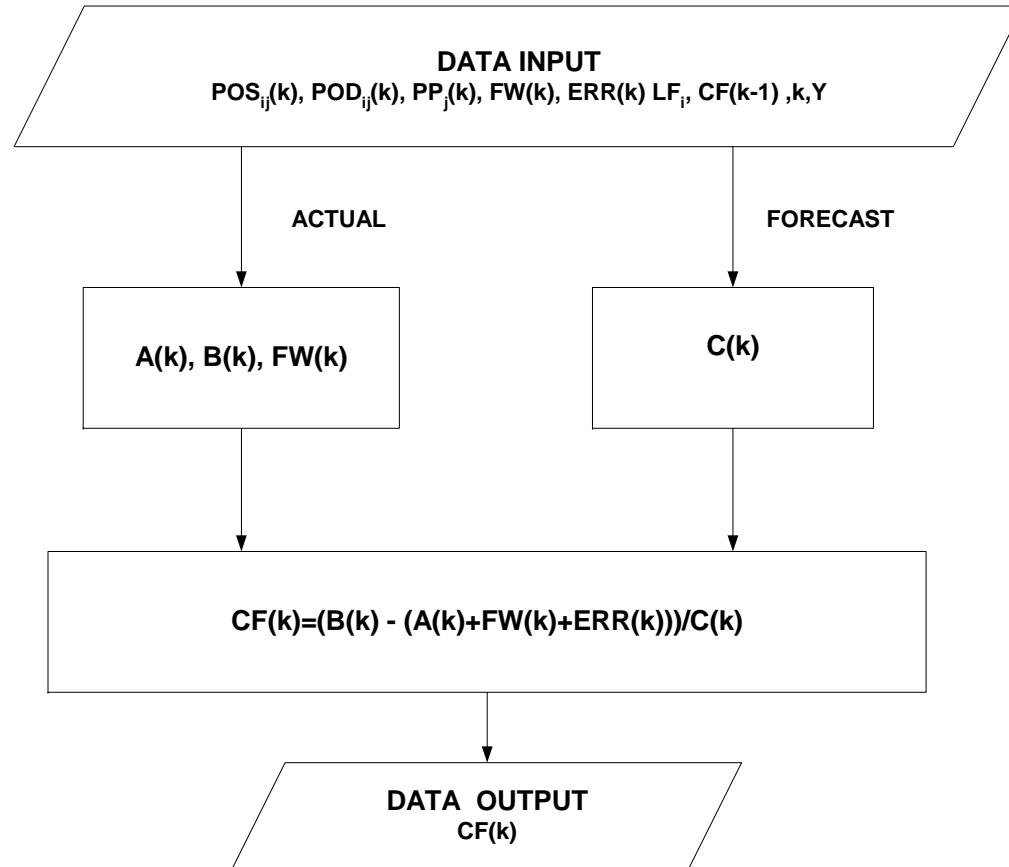
July 20, 2005

Released to Stakeholders, August 10, 2005

DEFINITIONS OF THE SYMBOLS

SYMBOLS	DESCRIPTION
A(k) ($)	**CALCULATED LOSSES** $$A(1) = \sum_{i=1}^{n_s} \sum_{j=1}^{h_{Jan.-Mar.,Y-1}} POS_{ij}(1) \times PP_j(1) \times (LF_i + CF(1))$$ $$+ \sum_{i=1}^{n_s} \sum_{j=1}^{h_{Apr.-Jun.,Y-1}} POS_{ij}(1) \times PP_j(1) \times (LF_i + CF(2))$$ $$+ \sum_{i=1}^{n_s} \sum_{j=1}^{h_{Jul.-Sept.,Y-1}} POS_{ij}(1) \times PP_j(1) \times (LF_i + CF(3))$$ $$+ \sum_{i=1}^{n_s} \sum_{j=1}^{h_{Oct.,Y-1.}} POS_{ij}(1) \times PP_j(1) \times (LF_i + CF(4))$$ $$A(2) = \sum_{i=1}^{n_s} \sum_{j=1}^{h_{Jan,Y}} POS_{ij}(2) \times PP_j(2) \times (LF_i + CF(1))$$

$$A(3) = \sum_{i=1}^{n_s} \sum_{j=1}^{h_{\text{Jan.-Mar., Y}}} POS_{ij}(3) \times PP_j(3) \times (LF_i + CF(1))$$

$$+ \sum_{i=1}^{n_s} \sum_{j=1}^{h_{\text{Apr.,Y}}} POS_{ij}(3) \times PP_j(3) \times (LF_i + CF(2))$$

$$A(4) = \sum_{i=1}^{n_s} \sum_{j=1}^{h_{\text{Jan.-Mar.,Y}}} POS_{ij}(4) \times PP_j(4) \times (LF_i + CF(1))$$

$$+ \sum_{i=1}^{n_s} \sum_{j=1}^{h_{\text{Apr.-Jun.,Y}}} POS_{ij}(4) \times PP_j(4) \times (LF_i + CF(2))$$

$$+ \sum_{i=1}^{n_s} \sum_{j=1}^{h_{\text{Jul.,Y}}} POS_{ij}(4) \times PP_j(4) \times (LF_i + CF(3))$$

B(k) ($)	**ACTUAL LOSSES** $$B(k) = \sum_{i=1}^{n_s} \sum_{j=1}^{h_A(k)} POS_{ij}(k) \times PP_j(k) - \sum_{i=1}^{n_d} \sum_{j=1}^{h_A(k)} POD_{ij}(k) \times PP_j(k)$$

C(k) ($)	FORECAST LOSSES $$C(k) = \sum_{i=1}^{n_s} \sum_{j=1}^{h_C(k)} POS_{ij}(k) \times PP_j(k) \times LF_i$$
FW(k) (MWH)	Previous Year Carry-Forward Losses in the kth Calculation $$FW(k) = BB(k) - (AA(k) + ERR(k))$$
AA(k) ($)	$$AA(k) = \sum_{i=1}^{n_s} \sum_{j=1}^{h_{Jan.-Mar.,Y-1}} POS_{ij}(k) \times PP_j(k) \times (LF_i + CF(1))$$ $$+ \sum_{i=1}^{n_s} \sum_{j=1}^{h_{Apr.-Jun.,Y-1}} POS_{ij}(k) \times PP_j(k) \times (LF_i + CF(2))$$ $$+ \sum_{i=1}^{n_s} \sum_{j=1}^{h_{Jul.-Sept.,Y-1}} POS_{ij}(k) \times PP_j(k) \times (LF_i + CF(3))$$ $$+ \sum_{i=1}^{n_s} \sum_{j=1}^{h_{Oct.-Dec.,Y-1.}} POS_{ij}(k) \times PP_j(k) \times (LF_i + CF(4))$$
BB(k) ($)	$$BB(k) = \sum_{i=1}^{n_s} \sum_{j=1}^{h_{Jan.-Dec.,Y-1}} POS_{ij}(k) \times PP_j(k) - \sum_{i=1}^{n_d} \sum_{j=1}^{h_{Jan.-Dec.,Y-1}} POD_{ij}(k) \times PP_j(k)$$

ERR(k) ($)	Previous Metering Error in the kth Calculation
$POS_{ij}(k)$ (MWH)	Hourly Energy Volume of Point OF Supply at the ith Measurement Point in the jth hour of the kth Calculation (Gen, ISD, Import)
$POD_{ij}(k)$ (MWH)	Hourly Energy Volume of Point OF Demand at the ith Measurement Point in the jth hour of the kth Calculation (DOS, Export)
$PP_j(k)$ ($/MWH)	Hourly Pool Price in the jth hour of the kth Calculation
h_T	Hourly number in the time period of T
$h_A(k)$	Hourly number of the kth calculation (backward) $h_A(1)$ = hourly number from Jan. 1 to Oct. 31 (Y-1) $h_A(2)$ = hourly number from Jan. 1 to Jan. 31 (Y) $h_A(3)$ = hourly number from Jan. 1 to Apr. 30 (Y) $h_A(4)$ = hourly number from Jan. 1 to Jul. 31 (Y)
$h_C(k)$	Hourly number of the kth calculation (forward) $h_C(1)$ = hourly number from Jan. 1 to Dec. 31 (Y) $h_C(2)$ = hourly number from Apr.1 to Dec. 31 (Y) $h_C(3)$ = hourly number from Jul. 1 to Dec. 31 (Y) $h_C(4)$ = hourly number from Oct. 1 to Dec. 31 (Y)
CF(k)	Calibration Factor of the kth Calculation

LF_i	Loss Factor at the ith Measurement Point
k	The kth Calculation The 1st Calculation starts on Nov. 10th (Y-1) The 2nd Calculation starts on Feb. 10th (Y) The 3rd Calculation starts on May 10th (Y) The 4th Calculation starts on Aug. 10th (Y)
n_s	The total number of the POS
n_d	The total number of the POD
i	The ith Measurement Point
j	The jth hour
Y	Current Year