

Calculul pierderilor de energie - alimentare de baza din distribuitor LES 20 kV proiectat din Statia Suceava										
Tronson	Nr. abonati /tronson	l (km)	s (mm2)	I (A)	P (kW)	r0 (Ω/km)	Ks	DPJ real (w)	Nr. Cons. Existenti	Nr. Cons. Noi
tr. 0-1	sit. pr.	1.700	3x1x150	40.4	1190.0	0.208		1732.6		
tr. 1-2	sit. pr.	0.020	3x1x150	40.4	1190.0	0.208		20.4		
							Sit. pr.=	1753.0		
tr. 0-1:	LES 20 kV proiectata intre Statia Suceava si MCAv Sala Polivalenta proiectat									
tr. 1-2:	LES 20 kV proiectata intre MCAv Sala Polivalenta proiectat si PTAv 1 Sala Polivalenta proiectat									
							Total sit. pr. =	1753.0		
ΔPJoule = 1,753 kW										

TPM=3500h/an ; $\zeta = \text{TPM} \times (10000 + \text{TPM}) / (27520 - \text{TPM}) = 1967,1 \text{ h/an}$

$\Delta W \text{ Joule LES 20 kV} = \Delta P_{\text{joule}} \times \zeta = 1,753 \text{ kW} \times 1967,1 \text{ h/an} = 3448,3 \text{ kWh} = \mathbf{3,4483 \text{ MWh}}$

Calcul pierderi in trafo proiectat:

situatie proiectata:

PTAv Sala Polivalenta:

$\Delta W_{\text{trafo 20/0,4 kV, 1600kVA}} = \Delta P_{\text{Fe}} \times T_f + \Delta P_{\text{cu}} \times (S/\text{Sn})^2 \times \zeta = (1,08 \times 8760) + (12 \times 0,7656 \times 1967,1) = 27532,9 \text{ kWh} = \mathbf{27,5329 \text{ MWh}}$

$\Delta W \text{ total} = \Delta W \text{ Joule LES} + \Delta W \text{ trafo} = \mathbf{30,9812 \text{ MWh}}$

cresterea % CPT: $\Delta W \text{ Joule} / \Delta W_{\text{vinduta}} \times 100 = (30,9812 \text{ MWh} / (1,19 \text{ MW} \times \text{TRSM})) \times 100 = \mathbf{0,744 \%}$