

## SEFIR

### DELEGATION DU SERVICE PUBLIC DE PRODUCTION ET DE DISTRIBUTION DE CHAUFFAGE URBAIN

*Avenant n° 4*

**TARIF DE VENTE (HTVA)**  
**Tranche Conditionnelle**  
pour le mois de : **DECEMBRE 2017**

#### 1- Eléments proportionnel

R1c ENERGIE = 35,80 € HT / MWh

R1 EAU CHAUDE SANITAIRE = 3,58 € HT / M3

#### 2- Eléments fixe

R2 PRESTATIONS = 23,49 € HT / Kw

R3' ENTRETIEN CENTRALE ET S/ST = 1,83 € HT / Kw

R3" ENTRETIEN RESEAU = 1,10 € HT / Kw

R4' AMORTISSEMENT TRAVAUX = 16,11 € HT / Kw

R5 EXTENSIONS DU RESEAU = 2,56 € HT/Kw

**TOTAL R2** 45,09 € HT/Kw

| SEFIR                                            |   |        |          |                                 |                                                                                                    |  |  |  |  | JUSTIFICATION DU TARIF DE VENTE(HTVA)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
|--------------------------------------------------|---|--------|----------|---------------------------------|----------------------------------------------------------------------------------------------------|--|--|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--------|----------|--|----------|---|------|-------|---------------------------------|-----|---|-------|-------|----------------------------|-------|---|-------|-------|--------------------------|------|---|-------|-------|----------------------------|-------|--|--|--|--|--------|--|--|------|----------------------------|--|--|--------|--|--|
| Pour le mois de : DECEMBRE                       |   |        |          |                                 |                                                                                                    |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| VALEURS DE BASE DES INDICES                      |   |        |          |                                 | INDICES CONNUS AU : 31/12/2017                                                                     |  |  |  |  | TARIF DE BASE TRANCHE FERME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| EMT = 116,90                                     |   |        |          |                                 | ELMT (EMT indice remplacé par ELMT tarif vert A5 351107 - coefficient de raccordement 1 ) = 158,64 |  |  |  |  | <table><tr><td colspan="2"></td><td>Coef %</td><td>Val base</td><td></td></tr><tr><td>Gaz cogé</td><td>a</td><td>9,0%</td><td>20,44</td><td>date date de valeur 01 mai 2014</td></tr><tr><td>Gaz</td><td>b</td><td>16,0%</td><td>49,27</td><td>date de valeur 01 mai 2014</td></tr><tr><td>Fioul</td><td>c</td><td>12,0%</td><td>55,81</td><td>date de valeur sept 2010</td></tr><tr><td>Bois</td><td>d</td><td>63,0%</td><td>28,39</td><td>date de valeur 01 mai 2014</td></tr><tr><td>Autre</td><td></td><td></td><td></td><td></td></tr><tr><td>R1 CO2</td><td></td><td></td><td>0,18</td><td>date de valeur 01 mai 2014</td></tr><tr><td colspan="2"></td><td colspan="2">100,0%</td><td></td></tr></table> |  |  |  |  |  |  |  |  |  |  |  | Coef % | Val base |  | Gaz cogé | a | 9,0% | 20,44 | date date de valeur 01 mai 2014 | Gaz | b | 16,0% | 49,27 | date de valeur 01 mai 2014 | Fioul | c | 12,0% | 55,81 | date de valeur sept 2010 | Bois | d | 63,0% | 28,39 | date de valeur 01 mai 2014 | Autre |  |  |  |  | R1 CO2 |  |  | 0,18 | date de valeur 01 mai 2014 |  |  | 100,0% |  |  |
|                                                  |   | Coef % | Val base |                                 |                                                                                                    |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| Gaz cogé                                         | a | 9,0%   | 20,44    | date date de valeur 01 mai 2014 |                                                                                                    |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| Gaz                                              | b | 16,0%  | 49,27    | date de valeur 01 mai 2014      |                                                                                                    |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| Fioul                                            | c | 12,0%  | 55,81    | date de valeur sept 2010        |                                                                                                    |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| Bois                                             | d | 63,0%  | 28,39    | date de valeur 01 mai 2014      |                                                                                                    |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| Autre                                            |   |        |          |                                 |                                                                                                    |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| R1 CO2                                           |   |        | 0,18     | date de valeur 01 mai 2014      |                                                                                                    |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
|                                                  |   | 100,0% |          |                                 |                                                                                                    |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| FOD = 247,78                                     |   |        |          |                                 | FODC4 = 266,89                                                                                     |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| ICHT-IME = 100,90                                |   |        |          |                                 | ICHT-IME = 119,10                                                                                  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| ICHT rev TS = 100,90                             |   |        |          |                                 |                                                                                                    |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| IT "date de valeur 01 mai 2014" = 136,22         |   |        |          |                                 | IT = 133,28                                                                                        |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| A38CC = 101,30                                   |   |        |          |                                 | A38CC =                                                                                            |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| FSD1 "date de valeur 01 mai 2014" = 129,60       |   |        |          |                                 | FSD1 = 128,40                                                                                      |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| FSD1 = 118,10                                    |   |        |          |                                 |                                                                                                    |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| FSD2 = 117,10                                    |   |        |          |                                 | FSD2 = 126,60                                                                                      |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| BT40 = 952,30                                    |   |        |          |                                 | BT40 = 1038,73                                                                                     |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| G0 "date de valeur 01 mai 2014" = 34,70          |   |        |          |                                 | G = 35,12                                                                                          |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| BT40 (révision R1 cogé) = 1019,80                |   |        |          |                                 | BT40 = 1038,73                                                                                     |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| ICEEB-PF "date de valeur 01 mai 2014" = 112,60   |   |        |          |                                 | ICEEB-PF = 106,00                                                                                  |  |  |  |  | 3eme trimestre 2017                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |
| ICEEB-CLA ""date de valeur 01 mai 2014" = 131,50 |   |        |          |                                 | ICEEB-CLA = 150,90                                                                                 |  |  |  |  | 3eme trimestre 2017                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  |  |  |        |          |  |          |   |      |       |                                 |     |   |       |       |                            |       |   |       |       |                          |      |   |       |       |                            |       |  |  |  |  |        |  |  |      |                            |  |  |        |  |  |

CALCUL TERME R1

R1c = a x R1cogé + b x R1gaz + c x R1fioul + d

|          |         |   |                                                                                                                 |  |        |       |   |                           |   |         |
|----------|---------|---|-----------------------------------------------------------------------------------------------------------------|--|--------|-------|---|---------------------------|---|---------|
| R1Gaz =  | R1Gazo  | x | $\frac{G}{Go}$                                                                                                  |  | R1Gaz= | 49,27 | x | $(\frac{35,120}{34,700})$ | = | 49,87   |
| R1FOD =  | R1Fodo  | x | $\frac{Fod}{Fodo}$                                                                                              |  | R1FOD= | 55,81 | x | $\frac{266,89}{247,78}$   | = | 60,11   |
| R1cogé = | R1cogéo | x | ( 0,10 + 0,65 x $\frac{G}{Co}$ + 0,10 x $\frac{BT40}{BT40o}$ + 0,15 x $\frac{FSD1}{FSD1o}$ )                    |  |        |       |   |                           |   |         |
| R1cogé = | 20,44   | x | ( 0,10 + 0,65 x $\frac{35,120}{34,700}$ + 0,10 x $\frac{1038,73}{1019,80}$ + 0,15 x $\frac{128,40}{129,60}$ )   |  |        |       |   |                           |   | = 20,61 |
| R1bois = | R1Boiso | x | ( 0,15 + 0,15 x $\frac{IT}{ITo}$ + 0,30 x $\frac{ICEEB-PF}{ICEEB-PFo}$ + 0,4 x $\frac{ICEEB-CLA}{ICEEB-CLAo}$ ) |  |        |       |   |                           |   |         |
| R1bois = | 28,39   | x | ( 0,15 + 0,15 x $\frac{133,280}{136,220}$ + 0,30 x $\frac{106,00}{112,60}$ + 0,4 x $\frac{150,90}{131,50}$ )    |  |        |       |   |                           |   | = 29,47 |
| R1mwh =  | 16%     | x | 49,87 + 12% x 60,11 + 9% x 20,61 + 63% x 29,47 + 0,18                                                           |  |        |       |   |                           |   | = 35,80 |
| R1m3 =   | 3,58    |   |                                                                                                                 |  |        |       |   |                           |   |         |

CALCUL TERME R2

R2 = R2o x ( 0,1 + 0,1  $\frac{EMT}{EMTo}$  + 0,45  $\frac{ICHT-IME}{ICHT-IMEo}$  + 0,35  $\frac{FSD1}{FSD1o}$  )

R2 = 20,47 x ( 0,1 + 0,1  $\frac{158,64}{116,90}$  + 0,45  $\frac{119,10}{100,90}$  + 0,35  $\frac{128,40}{118,10}$  ) = 23,49

CALCUL TERME R3'

R3' = R3'o x ( 0,15 + 0,3  $\frac{ICHT-IME}{ICHT-IMEo}$  + 0,55  $\frac{BT40}{BT40o}$  )

R3' = 1,66 x ( 0,15 + 0,3  $\frac{119,10}{100,90}$  + 0,55  $\frac{1038,73}{952,30}$  ) = 1,83

CALCUL TERME R3''

R3'' = R3''o x ( 0,15 + 0,3  $\frac{ICHT-IME}{ICHT-IMEo}$  + 0,55  $\frac{BT40}{BT40o}$  )

R3'' = 1 x ( 0,15 + 0,3  $\frac{119,10}{100,900}$  + 0,55  $\frac{1038,73}{952,30}$  ) = 1,10

CALCUL TERME R4' TC

R4' = R4'o x ( 0,1 + 0,6  $\frac{BT40}{BT40o}$  + 0,3  $\frac{ICHT-IME}{ICHT-IMEo}$  )

R4' = 14,98 x ( 0,1 + 0,6  $\frac{1038,73}{952,30}$  + 0,3  $\frac{119,10}{100,90}$  ) = 16,11

Actualisation à la mise en service

CALCUL TERME R5

R5 = R5o x ( 0,1 + 0,6  $\frac{BT40}{BT40o}$  + 0,3  $\frac{ICHT-IME}{ICHT-IMEo}$  )

R5 = 2,31 x ( 0,1 + 0,6  $\frac{1038,73}{952,30}$  + 0,3  $\frac{119,10}{100,90}$  ) = 2,56

DECEMBRE

Valeur en mai 2014

|                     |           | Contrats 2014 - 2015 |        |        |            | Mis à jour tarif mois n |       |       |        |
|---------------------|-----------|----------------------|--------|--------|------------|-------------------------|-------|-------|--------|
|                     |           | LV                   | FT     | FB     | Global av4 | LV                      | FT    | FB    | Mois n |
| Conso               | MWh PCS   | 28 672               | 7 700  | 3 650  | 40 022     | 31 122                  | 6 500 | 4 000 | 41 622 |
| PEG NORD_MA         | €/MWh pcs | 21,13                | 21,13  | 21,13  | 21,13      | 19,94                   | 19,94 | 19,94 | 19,94  |
| Prix fournisseur    | €/MWh pcs | 2,81                 | 0,77   | 0,77   | 2,23       | 3,60                    | 2,27  | 2,27  | 3,22   |
| Terme variable      | €/MWh pcs | 0,76                 | 5,28   | 5,28   | 2,04       | 0,8                     | 5,7   | 5,7   | 2,19   |
| Stockage            | €/MWh pcs | 2,04                 | 1,78   | 1,78   | 1,97       | 2,04                    | 0,93  | 0,93  | 1,73   |
| Prix de ma molécule | €/MWh pcs |                      |        |        | 27,37      |                         |       |       | 27,08  |
| TSS                 | €/MWh pcs | 0,2                  | 0,2    | 0,2    | 0,20       | -                       | -     | -     | 0,00   |
| Biométhane          | €/MWh pcs | 0,0072               | 0,0072 | 0,0072 | 0,01       | -                       | -     | -     | 0,00   |
| TICGN               | €/MWh pcs | 1,19                 | 1,19   | 1,27   | 1,20       | 1,52                    | 1,52  | 5,88  | 1,94   |
| Taxes               | €/MWh pcs |                      |        |        | 1,41       |                         |       |       | 1,94   |

|                       |   | 183 409 | 36 092 | 17 590 | 237 091 | 202 916  | 31 546 | 19 700 | 254 162 |
|-----------------------|---|---------|--------|--------|---------|----------|--------|--------|---------|
| Terme fixe            | € |         |        |        |         |          |        |        |         |
| TCS                   |   | 89,32   | 89,32  | 89,32  |         | 89,44    | 89,44  | 89,44  |         |
| TCR                   |   | 64,42   | 64,42  | 64,42  |         | 74,3     | 74,3   | 74,3   |         |
| NTR                   |   | 2       | 2      | 2      |         | 2        | 2      | 2      |         |
| TCL                   |   | 33,92   | 33,92  | 33,92  |         | 43,65    | 43,65  | 43,65  |         |
| CJn                   |   | 340     | 133,50 | 63,40  |         | 340      | 103,89 | 63,72  |         |
| AbtD                  |   | 14296,8 | 707,64 | 707,64 |         | 15395,16 | 748,68 | 748,68 |         |
| Nb_PCE                |   | 1       | 1      | 1      |         | 1        | 1      | 1      |         |
| TSACJ                 |   | 186     |        |        |         | 204,6    |        |        |         |
| taux CTA transport    |   | 0,0471  | 0,0471 | 0,0471 |         | 0,0471   | 0,0471 | 0,0471 |         |
| taux CTA distribution |   | 0,208   | 0,208  | 0,208  |         | 0,208    | 0,208  | 0,208  |         |
| Terme fixe            |   |         |        |        | 5,92    |          |        |        | 6,11    |

- = variation mensuelle
- = variation annuelle LE 01/04
- = variation selon contrat d'appro
- = variation annuelle le 01/01
- = variation annuelle le 1/07

G<sub>0</sub> 34,70

$$G = G_0 (Peg-Peg_0) + (Taxe-tax_0) + (Prime\ fixe-Prime\ fixe_0) / MWh\ gaz$$
  
G 35,12