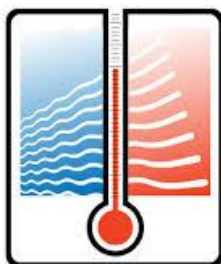




**Strategia de alimentare cu energie termică a consumatorilor
din municipiul Cluj-Napoca
în perioada 2021 – 2031 și perspectiva 2050**

Autoritatea contractantă
S.C. Termoficare Napoca S.A.



Prestator
Universitatea Tehnică din Cluj-Napoca



Beneficiar
UAT Municipiul Cluj Napoca



Anexa. Eșalonare investiții

Cluj-Napoca: 2021

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Eșalonare investiții

| | |
|----------------------|--------------------------|
| SF | SURSA+Rețele distributie |
| SURSA | Rețele distribuție |
| RETEA INTERCONECTARE | |

| A55 | | mii euro | | | | | | | | | | | |
|-----|-------------------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|----------------|------------------|--------------|
| | | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | Val fin cu SF | Val. Fin fara SF | SF |
| | TOTAL INVESTITII | 1,474 | 9,029 | 22,079 | 42,913 | 50,786 | 40,183 | 24,646 | 11,044 | 3,563 | 205,716 | 202,676 | 3,040 |
| | 2% Finantare UAT | | 164 | 426 | 858 | 1,016 | 804 | 493 | 221 | 71 | | 4,054 | |
| | Total SF-uri | 1,474 | 805 | 761 | | | | | | | | | 3,040 |

| | | TOTAL INSULE DE ENERGIE | 430 | 2,263 | 8,314 | 17,869 | 25,781 | 25,190 | 11,188 | | 91,036 | 89,690 | 1,345 |
|-----------|----------|--------------------------------|------------|--------------|--------------|---------------|---------------|---------------|---------------|--|---------------|---------------|--------------|
| 1 | A | Insula 11,12 Gheorgheni | 97 | 338 | 1,533 | 2,883 | 1,688 | | | | 6,537 | 6,441 | 97 |
| 2 | | Insula 16,17 Manastur | 107 | 413 | 1,510 | 3,160 | 2,063 | | | | 7,252 | 7,145 | 107 |
| 3 | | Insula 8,10 Manastur | 95 | 438 | 986 | 2,736 | 2,188 | | | | 6,442 | 6,347 | 95 |
| 4 | | Insula 5,6,7 Gheorgheni | 131 | 600 | 1,372 | 3,772 | 3,000 | | | | 8,875 | 8,744 | 131 |
| | | Total A | 430 | 1,788 | 5,400 | 12,551 | 8,938 | | | | 29,106 | 28,676 | 430 |
| 5 | B | Insula 5,20 Manastur | | 113 | 588 | 817 | 3,167 | 2,938 | | | 7,622 | 7,509 | 113 |
| 6 | | Insula 9,10 Gheorgheni | | 105 | 525 | 882 | 2,982 | 2,625 | | | 7,119 | 7,014 | 105 |
| 7 | | Insula 2,3,4 Manastur | | 156 | 813 | 1,137 | 4,387 | 4,063 | | | 10,555 | 10,399 | 156 |
| 8 | | Insula 12,13 Manastur | | 102 | 550 | 644 | 2,844 | 2,750 | | | 6,890 | 6,788 | 102 |
| | | Total B | | 476 | 2,475 | 3,481 | 13,380 | 12,375 | | | 32,186 | 31,711 | 476 |
| 9 | C | Insula 4,5,9 Grigorescu | | | 146 | 400 | 871 | 4,471 | 4,000 | | 9,888 | 9,742 | 146 |
| 10 | | Insula 14,15 Manastur | | | 87 | 463 | 583 | 2,433 | 2,313 | | 5,877 | 5,791 | 87 |
| 11 | | Insula 3,4 Zorilor | | | 164 | 975 | 593 | 4,493 | 4,875 | | 11,100 | 10,936 | 164 |
| 12 | | Insula 1,2,3,8 Gheorgheni | | | 43 | 0 | 1,418 | 1,418 | | | 2,878 | 2,836 | 43 |
| | | Total C | | | 440 | 1,838 | 3,464 | 12,815 | 11,188 | | 29,743 | 29,304 | 440 |

| | | | mii euro | | | | | | | | | | Val fin cu SF | Val. Fin fara SF | SF |
|----------|------------------|------------------------|------------|--------------|--------------|--------------|---------------|--------------|--------------|--------------|--------------|---------------|------------------|---------------------|----|
| | | | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| | | Total CTZ | 730 | 3,960 | 3,597 | 9,260 | 11,469 | 7,031 | 7,031 | 7,031 | 3,125 | 53,235 | 52,449 | 787 | |
| 1 | | Insula 1,3,4 Pata | 155 | 888 | 728 | 4,278 | 4,438 | | | | | 10,486 | 10,331 | 155 | |
| | Lot 1 CTZ | PT/CT 26 Marasti | | 16 | 332 | 750 | | | | | | 1,098 | 1,082 | 16 | |
| 3 | | PT/CT Venus | | 9 | 100 | 500 | | | | | | 609 | 600 | 9 | |
| 4 | | PT/CT 11 Marasti | | 31 | 67 | 2,000 | | | | | | 2,098 | 2,067 | 31 | |
| | | Total Lot 1 CTZ | | 56 | 499 | 3,250 | | | | | | 3,805 | 3,749 | 56 | |
| 5 | | CTZ Reconfigurat | 576 | 3,016 | 2,370 | 1,732 | 7,031 | 7,031 | 7,031 | 7,031 | 3,125 | 38,944 | 38,368 | 576 | |

| | | | mii euro | | | | | | | | | | Val fin cu SF | Val. Fin fara SF | SF |
|---|--|---------------------|-----------|------------|------------|------|------|------|------|------|------|--------------|------------------|---------------------|----|
| | | | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | | | | |
| Total Proiect Pilot Timișului-Blajului | | | 23 | 783 | 739 | | | | | | | 1,545 | 1,522 | 23 | |
| 1 | | pompe de căldură | 12 | 419 | 375 | | | | | | | 806 | 794 | 12 | |
| | | sistem solar termic | 11 | 364 | 364 | | | | | | | 739 | 728 | 11 | |

| | | | mii euro | | | | | | | | | | | | |
|-----------|--------------|-------------------------|------------|--------------|--------------|---------------|---------------|--------------|--------------|--------------|------------|------------------|---------------------|------------|----|
| | | | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | Val fin cu SF | Val. Fin fara SF | SF | |
| | | TOTAL CT CVARTAL | 291 | 2,023 | 9,428 | 15,783 | 13,536 | 7,961 | 6,428 | 4,013 | 438 | 59,900 | 59,015 | 885 | |
| 1 | Lot 1 | CT 13 Gheorgheni | 47 | 688 | 1,555 | 868 | | | | | | 3,157 | 3,110 | 47 | |
| 2 | | CT 4 Gheorgheni | 56 | 1,063 | 1,864 | 802 | | | | | | | 3,785 | 3,729 | 56 |
| 3 | | CT Plopilor | 73 | | 1,813 | 2,427 | 614 | | | | | | 4,926 | 4,853 | 73 |
| 4 | | CT 1 Manastur | 45 | | 1,125 | 1,503 | 378 | | | | | | 3,051 | 3,006 | 45 |
| 5 | | CT 7 Manastur | 35 | | | 813 | 1,170 | 358 | | | | | 2,375 | 2,340 | 35 |
| 6 | | CT Muncii | 35 | | | 813 | 1,170 | 357 | | | | | 2,374 | 2,339 | 35 |
| | | Total Lot 1 | 291 | 1,750 | 6,357 | 7,224 | 3,332 | 715 | | | | 19,668 | 19,378 | 291 | |
| 7 | Lot 2 | CT Govora | | 39 | 938 | 1,289 | 351 | | | | | 2,616 | 2,578 | 39 | |
| 8 | | CT 2 Zorilor | | 64 | 1,813 | 2,145 | 333 | | | | | | 4,354 | 4,290 | 64 |
| 9 | | CT 6 Manastur | | 44 | | 1,188 | 1,471 | 283 | | | | | 2,986 | 2,941 | 44 |
| 10 | | CT 24 Manastur | | 44 | | 1,188 | 1,466 | 278 | | | | | 2,975 | 2,931 | 44 |
| 11 | | CT 1 Grigorescu | | 44 | | | 1,188 | 1,466 | 278 | | | | 2,975 | 2,931 | 44 |
| 12 | | CT 11 Manastur | | 38 | | | 1,000 | 1,268 | 268 | | | | 2,574 | 2,536 | 38 |
| | | Total Lot 2 | | 273 | 2,750 | 5,809 | 5,808 | 3,295 | 546 | | | 18,481 | 18,208 | 273 | |
| 13 | Lot 3 | CT 14 Gheorgheni | | | 40 | 1,063 | 1,330 | 268 | | | | 2,700 | 2,660 | 40 | |
| 14 | | CT 5 Zorilor | | | 58 | 1,688 | 1,941 | 253 | | | | | 3,939 | 3,881 | 58 |
| 15 | | CT Taberei | | | 41 | | 1,125 | 1,369 | 244 | | | | 2,778 | 2,737 | 41 |
| 16 | | CT 11 Grigorescu | | | 56 | | | 1,625 | 1,853 | 228 | | | 3,762 | 3,706 | 56 |
| 17 | | CT M Viteazu | | | 20 | | | 438 | 660 | 222 | | | 1,340 | 1,320 | 20 |
| 18 | | CT 15 AVS | | | 76 | | | | 2,313 | 2,532 | 219 | | 5,139 | 5,063 | 76 |
| 19 | | CT Gradini Manastur | | | 31 | | | | 813 | 1,031 | 218 | | 2,093 | 2,062 | 31 |
| | | Total Lot 3 | | | 321 | 2,750 | 4,396 | 3,952 | 5,882 | 4,013 | 438 | 21,751 | 21,430 | 321 | |

Centralizator eşalonare investiții

| A55 | mii euro | | | | | | | | | | Reducere cost anual energie | | | | | | | |
|---------------------------------|----------|-------|--------|--------|--------|--------|--------|--------|-------|------------------|-----------------------------|------|------|-------|-------|-------|-------|-------|
| | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | Val.inv. fara SF | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 |
| TOTAL INVESTITII | 1.474 | 9.029 | 22.079 | 42.913 | 50.786 | 40.183 | 24.646 | 11.044 | 3.563 | 202.676 | 91 | 232 | 774 | 1.225 | 1.460 | 1.476 | 2.048 | 2.048 |
| 2% Finantare UAT | | 164 | 426 | 858 | 1.016 | 804 | 493 | 221 | 71 | 4.054 | | | | | | | | |
| Total SF-uri | 1.474 | 805 | 761 | | | | | | | 3.040 | | | | | | | | |
| Total INSULE DE ENERGIE | 430 | 2.263 | 8.314 | 17.869 | 25.781 | 25.190 | 11.188 | | | 89.690 | | | 400 | 786 | 992 | 992 | 992 | 992 |
| Total CTZ | 730 | 3.960 | 3.597 | 9.260 | 11.469 | 7.031 | 7.031 | 7.031 | 3.125 | 52.449 | | 11 | 93 | 93 | 93 | 93 | 649 | 649 |
| Total Timișului-Blajului | 23 | 783 | 739 | | | | | | | 1.522 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 |
| Total CT CVARTAL | 291 | 2.023 | 9.428 | 15.783 | 13.536 | 7.961 | 6.428 | 4.013 | 438 | 59.015 | | 130 | 190 | 255 | 284 | 300 | 316 | 316 |

Reducere cost anual energie

| | | mii euro | | | | | | | | | | |
|-------------------------|--|-----------------------------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | | Reducere cost anual energie | | | | | | | | | | |
| | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
| TOTAL INVESTITII | | 91 | 232 | 774 | 1,225 | 1,460 | 1,476 | 2,048 | 2,048 | 2,048 | 2,048 | 2,048 |

| | | mii euro | | | | | | | | | | |
|--------------------------------|----------|-----------------------------|------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | Reducere cost anual energie | | | | | | | | | | |
| | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
| TOTAL INSULE DE ENERGIE | | | | 400 | 786 | 992 | 992 | 992 | 992 | 992 | 992 | 992 |
| 1 | A | Insula 11,12 Gheorgheni | | | 123 | 123 | 123 | 123 | 123 | 123 | 123 | 123 |
| 2 | | Insula 16,17 Manastur | | | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 |
| 3 | | Insula 8,10 Manastur | | | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 |
| 4 | | Insula 5,6,7 Gheorgheni | | | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 |
| Total A | | | | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 |
| 5 | B | Insula 5,20 Manastur | | | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 |
| 6 | | Insula 9,10 Gheorgheni | | | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 |
| 7 | | Insula 2,3,4 Manastur | | | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 |
| 8 | | Insula 12,13 Manastur | | | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 |
| Total B | | | | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| 9 | C | Insula 4,5,9 Grigorescu | | | | 91 | 91 | 91 | 91 | 91 | 91 | 91 |
| 10 | | Insula 14,15 Manastur | | | | 54 | 54 | 54 | 54 | 54 | 54 | 54 |
| 11 | | Insula 3,4 Zorilor | | | | 61 | 61 | 61 | 61 | 61 | 61 | 61 |
| 12 | | Insula 1,2,3,8 Gheorgheni | | | | 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| Total C | | | | | 86 | 292 | 292 | 292 | 292 | 292 | 292 | 292 |

| | | mii euro | | | | | | | | | | |
|------------------------|-------------------|-----------------------------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|
| | | Reducere cost anual energie | | | | | | | | | | |
| | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
| Total CTZ | | | 11 | 93 | 93 | 93 | 93 | 649 | 649 | 649 | 649 | 649 |
| 1 | Insula 1,3,4 Pata | | | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 |
| 2 | Lot 1 CTZ | PT/CT 26 Marasti | | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 3 | | PT/CT Venus | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 4 | | PT/CT 11 Marasti | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Total Lot 1 CTZ | | | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 5 | CTZ Reconfigurat | | | | | | | 556 | 556 | 556 | 556 | 556 |

| | | mii euro | | | | | | | | | | |
|---|---------------------|-----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | Reducere cost anual energie | | | | | | | | | | |
| | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
| Total Proiect Pilot Timişului-Blajului | | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 |
| 1 | pompe de căldură | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| | sistem solar termic | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 |

| | | mii euro | | | | | | | | | | |
|-----------|---------------------|-----------------------------|------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | Reducere cost anual energie | | | | | | | | | | |
| | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
| | | TOTAL CT CVARTAL | | 130 | 190 | 255 | 284 | 300 | 316 | 316 | 316 | 316 |
| 1 | Lot 1 | CT 13 Gheorgheni | | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 |
| 2 | | CT 4 Gheorgheni | | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 |
| 3 | | CT Plopilor | | | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| 4 | | CT 1 Manastur | | | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| 5 | | CT 7 Manastur | | | | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| 6 | | CT Muncii | | | | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| | | Total Lot 1 | | 130 | 165 | 191 | 191 | 191 | 191 | 191 | 191 | 191 |
| 7 | Lot 2 | CT Govora | | | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| 8 | | CT 2 Zorilor | | | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| 9 | | CT 6 Manastur | | | | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 10 | | CT 24 Manastur | | | | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 11 | | CT 1 Grigorescu | | | | | 10 | 10 | 10 | 10 | 10 | 10 |
| 12 | | CT 11 Manastur | | | | | 10 | 10 | 10 | 10 | 10 | 10 |
| | | Total Lot 2 | | | 25 | 45 | 65 | 65 | 65 | 65 | 65 | 65 |
| 13 | Lot 3 | CT 14 Gheorgheni | | | | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 14 | | CT 5 Zorilor | | | | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 15 | | CT Taberei | | | | | 9 | 9 | 9 | 9 | 9 | 9 |
| 16 | | CT 11 Grigorescu | | | | | | 8 | 8 | 8 | 8 | 8 |
| 17 | | CT M Viteazu | | | | | | 8 | 8 | 8 | 8 | 8 |
| 18 | | CT 15 AVS | | | | | | | 8 | 8 | 8 | 8 |
| 19 | CT Gradini Manastur | | | | | | | 8 | 8 | 8 | 8 | |
| | | Total Lot 3 | | | | 19 | 28 | 44 | 60 | 60 | 60 | 60 |