**Annex 2**

Technical Offer

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| 1. Device Specifications  **1. Device name** | Neutral cluster and Air Ion Spectrometer |
| **2. Model** | NAIS 103.5 |
| **3. Producer** | Airel Ltd. Observatooriumi 5, 61602 Tõravere, Estonia |
| **4. Measurement Range** | |
| Particle distribution | from ~ 2 to 40 nm |
| Ion distribution | from 3.3 to 0.0013 cm2/V/s equivalent size from 0.8 to 40 nm |
| **5. Measurement Principle** | Parallel differential mobility analysis with optional unipolar charging |
| **6. Sample Flow Rate** | 54 l/min |
| **7. Time Resolution** | 1 second 1 – 5 minute averages typically used during long-term monitoring |
| **8. Data Processing** | Measurement distributions available immediately in real-time.  Processed and corrected data available within 1 – 5 minutes. |
| **9. Data Output** | Plain text files, tab separated values with additional metadata in header. |
| **10. Operating Temperature** | -20 to 40 °C |
| **11. Sample Air Pressure** | 300 to 1200 hPa |
| **12. Power Requirement** | 70 W, AC 110/240 V, surge protection |
| **13. Interface** | RJ45 (ethernet), LAN or direct |
| **14. Dimensions** | L 580 mm, W 305 mm, H 810 mm |
| **15. Weight** | 60 kg |
| **16. Consumables** | None |
| **17. Servicing Interval** | 1 to 3 months |

2. Device Description

1. The NAIS is a multichannel aerosol instrument for measurement of the mobility distribution of air ions and size distribution of all particles (charged and neutral) including neutral clusters.

2. The NAIS is based on the principle of parallel differential mobility analysis. Particles are classified in a static electric field based on their electrical mobility.

3. It consists of two multichannel electrical mobility analyzer columns operating in parallel. One mobility analyzer detects negatively charged particles, the other detects positively charged particles. The columns only differ by electrical polarity and are otherwise identical.

4. The particles are deposited on 25 collecting electrodes based on their electrical mobility or size. The signal from the electrodes is measured in parallel with an array of 25 electrometers in both columns.

5. The signal from the 25 electrometers of either column is processed by a data inversion algorithm to produce a complete size or mobility distribution of the particles or ions sampled by the device at that moment.

6. Before the mobility analyzers, the sample is passed through a software controlled sample preconditioning unit, which allows the instrument to switch between detecting either naturally charged particles (ions) or all particles (both charged and uncharged) by using unipolar charging based on corona discharge.

7. The maximum time resolution of the device is 1 second. Typically, between 0.5 and 5 minute average data is used.

8. The device only requires electric power and a data connection to the measurement computer. It does not use external pressurized air or vacuum. The device does not consume any liquids or gases.

9. The only maintenance that the NAIS requires is regular cleaning. No other regular human interaction with the instrument is required for normal measurements. Depending on the measurement location, the maintenance interval can range from 1-2 weeks (polluted downtown in megacities) to several months (boreal forest with clean air).

10. Software for measurement and quick data analysis is provided with the instrument free of charge.

3. Training

Airel Ltd. provides training for three persons for two days at company premises or online.

The company also provides online support for installation of the device.

4. Warranty

The device will be accompanied 1 year standard warranty

5. Supporting Services

Airel Ltd. provides twelve (12) months following the delivery free of charge on-line and telephone support within 2 business days of notification.

Free software updates are provided for three (3) years after the delivery of the device.

Technical support, which requires the physical presence of the contractor, shall be arranged through mutual agreement of the two parties.

6. Subcontractors

Airel Ltd. will not use subcontractors to fulfill any part of the offer. The offered product is in its entirety produces by Airel Ltd.