

KNMI Data Licence Office
 Licensee: Global Change Research Institute CAS
 Category: Independent Service Provider
 Month of Commencement: May 2017

date: 1 May 2017

ANNEX (product definitions and costs)

to ECMWF Licence Agreement between KNMI and , reference KNMI-2016/3411
 dated 1st August 2016, regarding the daily provision of Real-time Data Products from the ECMWF Catalogue.
 This Annex, dated 1st May 2017, supersedes all previous Annexes

Specification of the annual licence costs (EUR)

Dataset	Titel	Requested EPU/year
Dataset A	Title (Set, Area)	35 798,39 (information charge)
Total requested EPU/year		35 798,39 (information charge)
After volume discount		19 119,36
EPU tariff (EUR)		€ 0,60
Annual licence costs		€ 11 471,61
Expected turnover known?		No
Expected turnover		€ -
Customer new (no longer than two years)		No
Research discount		<input type="text" value="No"/> 0%
Gross licence costs		€ 11 471,61
Maximum licence costs		€ 140 000,00
Net licence costs		€ 11 471,61

Specification of the annual delivery costs (EUR) included 24 h proces control

Data extraction and grid transformation

Dataset	Requested EPU/year
Dataset A	110 565,72 (extraction charge)
Total requested EPU/year	
After volume discount	
Extraction/transformation tariff EUR/EPU	
Annual data extraction/grid transformation costs	

Data routeing charging

Dataset	Data routeing units/day
Dataset A	5 609,70
Total data routeing units per day	
First 1000 units	€ 2,04 EUR/unit
1001 -5000 units	€ 0,51 EUR/unit
5001 and more	€ 0,10 EUR/unit
Annual data routeing costs	
Annual delivery costs	
Research discount	
Net delivery costs	

Summary of the costs (EUR)

Annual licence costs	€ 11 471,61		
Annual delivery costs	€ 9 190,68		
Total per annum	€ 20 662,29	Sum due per month	€ 1 721,86

7) Payment schedule

Licensor has requested a payment schedule per month.

8) Signatures

For Licensor (KNMI)
 Dr. M.H.C.Koolhaas
 Strategic Business Manager

For Licensee (GCRC CAS)

Signature,

Signature,

Date:

Date:

Title (Set, Area)

Dataset Dataset A
 Set Set I - Atmospheric Model high resolution 10-day forecast (HRES)
 Subset I-i: Atmospheric fields
 Level Single level - analysis and forecast

Model runs +00h utc only 1
 Area definition, regular Lat/Lon
 North boundary 55,000 N West boundary 2,000 E
 South boundary 42,00 N East boundary 30,000 E
 Resolution Lat 0,100 degrees Resolution Lon 0,100 degrees
 Grid points in Lat 131 Grid points in Long 281
 Total number of grid points/field 36811

Information charging/field

EPU's/global field T1279/O1280/N640 20,00
 Size of the requested area (square degrees) 364
 Size of a global field (square degrees) 64800
 Adjustment factor due to area size 0,006
 Resolution T1279/O1280/N640 reduced Gaussian grid (degrees) 0,1125
 Requested product resolution (degrees) 0,100
 Adjustment factor due to resolution 1,1250
 EPU's/field 0,126 (information charge)

Data extraction charging/field

Grid points/field 36 811
 Grid points at resolution 0,1 equivalent to 1 EPU 94 300
 EPU's/field 0,390 (extraction charge)

Requested time series	Time step	From	To
	3h	0	144
	6h	144	240
			0

mandatory timesteps 65
 Requested analyses/forecast parameters 8*
 Requested forecast parameters 4**
 Requested model levels/pressure fields 1
 Free delivery of invariants at +00h only 1***
 Requested fields/day 776
 Requested fields/year 283240,00
 Requested EPU's/year 35798,39 (information charge)
 Requested EPU's/year 110565,72 (extraction charge)

Data routing charging

Distribution principle: at each time step one composite file comprising all requested forecast parameter fields

Grid points per forecast parameter field 36811
 Averaged bits per binary gridded value 14
 Data volume KB per parameter field 64,42
 Requested parameters 12
 Model versions / deduction factor 1 1 1,0
 Data volume KB per file 773,03
 Data routing units per file 86,30
 Files per day (=model runs*requested time steps) 65
 Data routing units/day 5609,70

*	U10	**	MX2T3, MN2T3 (+3h - +144h)	***	LSM
	v10		MX2T6, MN2T6 (+150h - +240h)		
	2t		TP		
	td		srd		
	tp				
	SWVL1				
	SWVL2				
	SWVL3				
	SWVL4				