Erratum

In Volume 25 No 1, the paper titled 'An indicative assessment of investment opportunities in the African electricity sector', by C Taliotis et al., was published on pages 2-12. On Page 4, Table 1 has been revised regarding the 100% efficiencies and 100% availabilities.

With regard to *100% efficiencies*, this is simply the way any renewable technology is modelled in MESSAGE. It does not refer in any way as to how efficient the technology is in transforming solar irradiation or wind into electricity. This is common practice for all renewable technologies that do not have fuel input. To explain further, in MESSAGE the modeller has to define an input and output ratio (i.e. efficiency). When it comes to renewable technologies one has 2 options:

a) Define an additional fuel (e.g. sunlight, wind etc) to act as an input (100%) and then add an out-

Table 1: Power plant parameters used in the model
Miketa and Merven (2013b)

Plant type	*Investment cost ($/kW)*	*Fixed O&M ($/kW)**	*Variable O&M ($/MWh)*	*Efficiency†*	*Life (yrs)*	*Capacity factor*	*Availability†*
Diesel centralized	1070	0	17	35%	25	80%	90%
Diesel 100 kW system							
(industry)	659	0	55	35%	20	80%	90%
Diesel/Gasoline 1kW system (residential/ commercial) 692 90%		0	33	35%	10	80%	
HFO	1350	0	15	35%	25	80%	90%
OCGT	603	0	20	30%	25	85%	93%
CCGT	1069	0	3	48%	30	85%	93%
CCGT Associated Gas	1069	0	3	48%	30	85%	93%
Supercritical coal	2403	0	14	37%	40	85%	94%
Nuclear	5028	93	1.37	33%	60	92%	93%

Renewables	*Investment cost ($/kW)*	*Fixed O&M ($/kW)**	*Variable O&M ($/MWh)*	*Efficiency*	*Life (yrs)*	*Capacity factor*	*Availability*
Hydro (run of river)	1282	21	1.14	N/A	50	54-80%	67-80%
Hydro (dam)	2718	21	1.14	N/A	50	60-100%	90-100%
Small Hydro	4000	0	5	N/A	50	50%	N/A
Biomass	2500	0	20	38%	30	50%	93%
Bulk Wind (30% CF)	2000	0	16	N/A	25	30%	90%
Bulk Wind (40% CF)	2000	0	14	N/A	25	40%	85%
Solar PV (utility)	2000	0	20	N/A	25	25%	N/A
Solar PV (rooftop)	2100	0	24	N/A	25	20%	N/A
Solar PV rooftop (1 hr storage)	4258	0	24	N/A	25	22.5%	N/A
Solar PV rooftop (2 hr storage)	6275	0	24	N/A	25	25%	N/A
Solar thermal without storage	3000	0	22	N/A	25	35%	N/A
Solar thermal with Storage	5400	0	19	N/A	25	50%	N/A
Solar thermal with gas co-firing	1388	0	19	53%	25	85%	93%
Geothermal (cheap)	3500	30	1.03	N/A	25	85%	N/A
Geothermal (expensive)	4500	0	1.03	N/A	25	85%	N/A

** Fixed O&M costs have been incorporated within Variable O&M costs for the majority of technologies.*

† Efficiencies and availabilities of renewable energy technologies indicated as 'N/A' have been taken into consideration when calculating the generation potential of the respective resource.

put to define the efficiency (e.g. 48% for wind).

b) Have no input and define output as 100%. If this option is chosen one has to account for the ability of the technology in question to convert sunlight/wind etc. into power outside the model. In our case, this was done when calculating the potentials for RE in the publication cited as Hermann *et al,* 2012.

The second option has the advantage of a smaller matrix being generated by the model and thus a faster calculation, and therefore we chose this. Thus, 'efficiency' as mentioned in the paper is simply the input-output ratio of each technology as defined in the actual model. It should have been made clearer in the paper.

Similarly, with regard to *100% availabilities*, one has to take into account the capacity factor at the same time. The total amount of time that the technology is available is a function of the multiplication of these two values. Furthermore, these two values are dependent on the load-curve defined for the technology (i.e. its availability/output during each time-slice of the year). In MESSAGE, availability (defined as "operation time" in the model) refers to the share of time the technology is available each year, whereas plant factor (capacity factor) is taken into consideration in regards to each individual time-slice (e.g. day, night etc.). Furthermore, in our model, for instance, load-curves were added to solar technologies to include the daily variability in generation of these technologies. In essence, these technologies are completely blocked in certain time-slices (e.g. night) or are only allowed to provide a certain volume of power, in the case of storage options. These load-curves have not been included in the paper, but they exist in the model. Therefore, *by defining load-curves in MESSAGE, both the availability and capacity factor of a technology are considered*. These load-curves have not been included in the paper, as it would greatly increase the size of the annexes.

All in all, it was a mistake to quote both these values in the paper without a more detailed explanation.