Table S1. A complete list of all total vectorial dynamic body acceleration (*VeDBA*) and time budget models considered in AIC analysis for explaining doubly-labelled water-estimated mass-specific total energy expenditure in wild pelagic cormorants across four locomotory modes: flying, diving, surface swimming, and movement on land.

Model	dAICc[a,b]	AICc weight	Adj. R^2	Avg. Absolute Deviation
$VeDBA_{\text{all other modes}}+VeDBA_{\text{surface}}$	0	0.36	0.92	0.19
$VeDBA_{\text{all modes}}$	0.3	0.26	0.91	0.21
$VeDBA_{\text{flying and surface}}+VeDBA_{\text{land and diving}}$	1.2	0.11	0.91	0.19
$VeDBA_{\text{flying and diving}}+VeDBA_{\text{land and surface}}$	1.4	0.09	0.91	0.19
$Time_{\text{flying and diving}}+Time_{\text{land and surface}}$	2.1	0.04	0.91	0.22
$VeDBA_{\text{all other modes}}+VeDBA_{\text{diving}}$	2.3	0.03	0.91	0.2
$VeDBA_{\text{flying and diving}}+VeDBA_{\text{land}}+VeDBA_{\text{surface}}$	2.9	0.02	0.92	0.18
$VeDBA_{\text{flying}}+VeDBA_{\text{all other modes}}$	3.1	0.02	0.9	0.21
$VeDBA_{\text{flying and land}}+VeDBA_{\text{surface}}+VeDBA_{\text{diving}}$	3.1	0.02	0.91	0.19
$VeDBA_{\text{flying and land}}+VeDBA_{\text{surface and diving}}$	3.2	0.02	0.9	0.21
$VeDBA_{\text{all other modes}}+VeDBA_{\text{land}}$	3.3	0.01	0.9	0.21
$VeDBA_{\text{flying}}+VeDBA_{\text{land and diving}}+VeDBA_{\text{surface}}$	3.5	0.01	0.91	0.19
$VeDBA_{\text{flying}}+VeDBA_{\text{land and surface}}+VeDBA_{\text{diving}}$	4.5	0.00	0.91	0.18
$VeDBA_{\text{flying and surface}}+VeDBA_{\text{land}}+VeDBA_{\text{diving}}$	4.6	0.00	0.91	0.19
$Time_{\text{flying and diving}}+Time_{\text{land}}+Time_{\text{surface}}$	4.6	0.00	0.91	0.22
$Time_{\text{flying}}+Time_{\text{land and water}}+Time_{\text{diving}}$	5.1	0.00	0.9	0.21
$Time_{\text{all other modes}}+Time_{\text{diving}}$	5.7	0.00	0.89	0.24
$VeDBA_{\text{flying}}+VeDBA_{\text{land}}+VeDBA_{\text{surface and diving}}$	6.6	0.00	0.9	0.21
$VeDBA_{\text{flying}}+VeDBA_{\text{land}}+VeDBA_{\text{surface}}+VeDBA_{\text{diving}}$	6.9	0.00	0.91	0.18
$Time_{\text{flying}}+Time_{\text{land}}+Time_{\text{surface}}+Time_{\text{diving}}$	8.1	0.00	0.9	0.21
$Time_{\text{flying and land}}+Time_{\text{surface}}+Time_{\text{diving}}$	8.7	0.00	0.88	0.25
$Time_{\text{flying and surface}}+Time_{\text{land}}+Time_{\text{diving}}$	9.1	0.00	0.88	0.25
$Time_{\text{all other modes}}+Time_{\text{land}}$	18.5	0.00	0.76	0.31
$Time_{\text{flying and land}}+Time_{\text{surface and diving}}$	19.7	0.00	0.74	0.25
$Time_{\text{flying}}+Time_{\text{land}}+Time_{\text{surface and diving}}$	20.8	0.00	0.76	0.31
$Time_{\text{flying}}+Time_{\text{all other modes}}$	30.5	0.00	0.51	0.32

$Time_{flying\ and\ surface}+Time_{land\ and\ diving}$	31.2	0.00	0.5	0.32
$Time_{all\ modes}$	31.7	0.00	0.42	0.21
$Time_{all\ other\ modes}+Time_{surface}$	32.2	0.00	0.46	0.33
$Time_{flying}+Time_{land\ and\ diving}+Time_{surface}$	32.4	0.00	0.52	0.3

[a]A finite-sample size correction was applied to all AIC values.

[b]An additional parameter was added to each model for intercept estimation.

Table S2. A complete list of all total vectorial dynamic body acceleration (*VeDBA*) models, in addition to models with the addition of a term representing hypometabolic processes while diving (in place of $VeDBA_{diving}$), considered in AIC analysis for explaining doubly-labelled water-estimated mass-specific total energy expenditure (kJ g^{-1}) in wild pelagic cormorants (n = 17) during four locomotory modes: flying, diving, surface swimming, and movement on land.[a]

Model	dAICc[a,b]	AICc weight	Adj. R^2	Avg. Absolute Deviation
$VeDBA_{flying\ and\ land}+VeDBA_{surface}+\sum(1-e0.79*Duration)$	0.0	0.56	0.94	0.16
$VeDBA_{all\ other\ modes}+\sum(1-e0.79*Duration)$	0.7	0.27	0.93	0.17
$VeDBA_{flying\ and\ surface}+VeDBA_{land}+\sum(1-e0.79*Duration)$	1.9	0.08	0.94	0.17
$VeDBA_{flying}+VeDBA_{land\ and\ surface}+\sum(1-e0.79*Duration)$	2.8	0.03	0.93	0.18
$VeDBA_{all\ other\ modes}+VeDBA_{surface}$	3.4	0.02	0.92	0.19
$VeDBA_{all\ modes}$	3.7	0.01	0.91	0.21
$VeDBA_{flying}+VeDBA_{land}+VeDBA_{surface}+\sum(1-e0.79*Duration)$	3.9	0.01	0.94	0.16
$VeDBA_{flying\ and\ surface}+VeDBA_{land\ and\ diving}$	4.5	0.01	0.91	0.19
$VeDBA_{flying\ and\ diving}+VeDBA_{land\ and\ surface}$	4.8	0.00	0.91	0.19
$VeDBA_{all\ other\ modes}+VeDBA_{diving}$	5.7	0.00	0.91	0.20
$VeDBA_{flying\ and\ diving}+VeDBA_{land}+VeDBA_{surface}$	6.2	0.00	0.92	0.18
$VeDBA_{flying}+VeDBA_{all\ other\ modes}$	6.5	0.00	0.9	0.21
$VeDBA_{flying\ and\ land}+VeDBA_{surface}+VeDBA_{diving}$	6.5	0.00	0.91	0.19
$VeDBA_{flying\ and\ land}+VeDBA_{surface\ and\ diving}$	6.6	0.00	0.9	0.21
$VeDBA_{all\ other\ modes}+VeDBA_{land}$	6.6	0.00	0.9	0.21
$VeDBA_{flying}+VeDBA_{land\ and\ diving}+VeDBA_{surface}$	6.8	0.00	0.91	0.19
$VeDBA_{flying}+VeDBA_{land\ and\ surface}+VeDBA_{diving}$	7.9	0.00	0.91	0.18
$VeDBA_{flying\ and\ surface}+VeDBA_{land}+VeDBA_{diving}$	7.9	0.00	0.91	0.19
$VeDBA_{flying}+VeDBA_{land}+VeDBA_{surface\ and\ diving}$	10.0	0.00	0.9	0.21
$VeDBA_{flying}+VeDBA_{land}+VeDBA_{surface}+VeDBA_{diving}$	10.3	0.00	0.91	0.18

[a]A finite-sample size correction was applied to all AIC values.

[b]An additional parameter was added to each model for intercept estimation.